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FOOD AND DRUG ADMINISTRATION (FDA) CENTER FOR DRUG EVALUATION AND RESEARCH (CDER) MEETING ON HIV PATIENT-FOCUSED DRUG DEVELOPMENT AND HIV CURE RESEARCH Friday, June 14, 2013 Food and Drug Administration White Oak Campus 10903 New Hampshire Avenue Silver Spring, MD 20993

Reported by: Natalia Thomas Capital Reporting Company

2 1 MEETING ROSTER 2 FDA STAFF 3 Debra Birnkrant, MD 4 Director, Division of Antiviral Products CDER, FDA 5 Edward Cox, MD, MPH 6 Director, Office of Antimicrobial Products CDER, FDA	4 1 MEETING ROSTER (CONT'D) 2 PUBLIC PARTICIPANTS 3 David Brakebill Robert Caldwell 4 Wanda Commander Catherine Connor 5 Lynda Dee Michael Dorosh 6 David Evans
 7 Damon Deming, PhD 8 Virology Reviewer Division of Antiviral Products 9 CDER, FDA 10 Sara Eggers, PhD Office of Program and Strategic Analysis (OSP) 11 CDER, FDA 12 Andrea Furia-Helms, MPH Health Programs Coordinator 13 FDA 14 Sara Goldkind, MD, MA Senior Bioethicist 15 Office of Good Clinical Practice Office of the Commissioner, FDA 16 Ilan Irony, MD 17 Chief, General Medicine Branch 	Kevin Fisher 7 Alex Garner Joseph Jefferson 8 Andy Kaytes Mabel Martin 9 Bob Munk Murray Penner 10 Melanie Reese Fred Schaich 11 Nathaniel Scruggs Matt Sharp 12 Jeff Taylor Dan Tietz 13 14 PUBLIC PARTICIPANTS IDENTIFIED BY FIRST NAME ONLY 15 Robert
Division of Clinical Evaluation and Pharmacology/Toxicology CBER, FDA 9 Richard Klein 20 Director, Patient Liaison Program Office of Health and Constituent Aflairs 21 Office of the Commissioner, FDA 22 Theresa Mullin, PhD Director, Office of Strategic Programs (OSP), CDER, FDA	Tim 16 17 18 19 20 21 22
 MEETING ROSTER (Continued) FDA Staff (Continued) Jeffrey Murray, MD, MPH Deputy Director, Division of Antiviral Products CDER, FDA Adam Sherwat, MD Medical Officer, Division of Antiviral Products CDER, FDA Kimberly Struble, PharmD Clinical Team Lead, Division of Antiviral Products CDER, FDA Clinical Team Lead, Division of Antiviral Products CDER, FDA Clinical Team Lead, Division of Antiviral Products CDER, FDA Operations Research Analyst FDA Celia Witten, MD, PhD Office Director, Office of Cellular, Tissue, and Gene Therapies CBER, FDA Janet Woodcock, MD Director CDER, FDA Ianet Woodcock, MD Director CDER, FDA Ianet Woodcock, MD Director CDER, FDA 	1 TABLE OF CONTENTS PAGE 2 Welcome 9 3 Edward Cox, MPH Director 9 4 Office of Antimicrobial Products CDER, FDA 7 5 Overview of FDA's Patient-Focused Drug 16 7 Theresa Mullin, PhD Director 16 7 Theresa Mullin, PhD Director 2 9 Background on Current HIV Treatment 25 10 Kimberly Struble, PharmD 1 11 Clinical Team Lead Division of Antiviral Products 2 12 CDER, FDA 28 13 Overview of Discussion Format 28 14 Sara Eggers, PhD Office of Program and Strategic Analysis 30 15 OSP, CDER, FDA 28 16 Discussion Format 28 17 Sara Eggers, PhD 0ffice of Program and Strategic Analysis 15 OSP, CDER, FDA 10 16 Discussion I: Patients' Perspectives on Current Approaches to Managing HIV and on Symptoms 31 17 Experienced Because of HIV or Its Treatments 39 18 Panel #1 Comments on Questions 1 - 3 40<

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PAGE 2	2 DR. EGGERS: Since we got silence, then we	
Panel #1 Comments on Questions 4 - 5 77		
3 Large-Group Facilitated Discussion	3 can go ahead and get started. My name is Sara Eggers,	
4 on Questions 4 - 5 77 5 Discussion with FDA Panel 113	4 and I am in CDER's Office of Strategic Programs, and I	
6	5 will be facilitating the discussion later on today,	
7 Lunch 113 8	6 but before we get into the discussion, we want to set	
Afternoon Opening Comments 125	7 a bit of the context for today's discussion, and so	
9 Janet Woodcock, MD Director, CDER, FDA	8 maybe I'll go over the agenda. Can we do the next	
10	9 slide?	
Summary of Morning Discussion 130	10 So we're going to set the context, and I'll	
Richard Klein	11 have some of my colleagues come up and do that, and	
12 Director, Patient Liaison Program Office of Health and Constituent Affairs	12 then we'll get into our discussion topic, our first	
 Office of the Commissioner, FDA Background on HIV Cure Research 134 	13 topic of the day, which is Patients' Perspectives on	
	14 Current HIV Treatments and Most Significant Symptoms.	
15 Ilan Irony, MD Chief, General Medicine Branch	15 And then after the lunch break we'll come back in the	
16 Division of Clinical Evaluation and		
Pharmacology/Toxicology 17 Center Biologics Evaluation and	16 afternoon, again we'll set some context on HIV cure	
Research, FDA	17 research, and then we'll have a discussion on that,	
18 Informed Consent Issues in HIV Cure Research 144	18 particularly getting at patients' perspectives on	
19 Sara Goldkind, MD, MA	19 participating in cure research studies and on the need	
20 Senior Bioethicist	20 for good communication through informed consent.	
Office of Good Clinical Practice 21 Office of the Commissioner, FDA	21 We will have an open public comment period	
22	22 after, at the end of the day. This is all in your	
7		9
7 1 TABLE OF CONTENTS (CONT'D)	1 agendas the times are in there. And if you would	9
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1 2 3 4 5 6 7 8	welcome, all. Today's meeting really is an important chance for us to hear from patients and patient advocates. And today's meeting is our second in a series of meetings conducted as part of the FDA's Patient-Focused Drug Development Initiative. So this initiative involves obtaining a better understanding of patients' perspectives on a particular disease and	2 3 4 5	forward to research and development in the area of cure research for HIV. And for the purposes of our meeting today, when we are talking about cure research, we're using the term to refer to any investigation that evaluates a possible therapy intended to control or eliminate HIV infection so that no further medications are needed to maintain health. HIV cure research is in early stages in	
9 10 11 12 13 14 15	treatments. And Theresa Mullin will speak to this a little bit more in just a minute. As part of this initiative, this meeting provides us a chance to hear directly from patients and patient advocates about living with HIV today, including the benefits and downsides of currently available treatments. And as we work through the day,	9 10 11 12 13 14 15	testing in patients, but the products and approaches being evaluated may represent important foundational work for advances in treating HIV. As in many areas of research, clinical trials studying HIV cure interventions may not provide direct benefit to a participant but may provide scientific information that could guide future	
16 17 18 19 20 21 22	Kim Struble will provide us a brief background discussion about the current status of treatment for HIV. The advances in therapies to manage HIV have really been truly remarkable over the last few decades, and when I joined the FDA, it's been a little bit over a decade ago now, and reflect back upon my	16 17 18 19 20 21 22	research and drug development. Today's meeting is an important opportunity to hear from and gain an understanding of patients' perspectives on potential benefits and risks of participating in HIV cure research. What we learn today will help us as we evaluate sponsors' study protocols and informed consent procedures for trials exploring HIV cure	
	11			13
2 3 4 5 6 7	time prior to coming to the FDA, I was an infectious disease fellow at NIAID over at NIH, also in my time as an ID practitioner, I never really would have imagined that the advances that we've seen in the development of antiretroviral therapies would have happened at the rate that they've happened. So today HIV infection is often viewed as a manageable chronic infection. However, we also need to keep in mind that HIV still is a serious and life-threatening condition that can have a significant impact on people's lives. And the New York Times had an article a couple of weeks ago that described this very point, went through a series of discussions of patients and what they were experiencing with their HIV infection, so I think that really helps to illustrate the points of the challenges of living with HIV today. So we're hear today recognizing that there is still more progress to be made and more work to be done to further advance the treatment and management of HIV. The meeting will also give us a chance this afternoon to explore important issues as we look	2 3 4 5 6 7 8	research. Ilan Irony, from the FDA Center for Biologics Evaluation and Research, and Sara Goldkind will give us a presentation this afternoon and provide background for the discussion on the questions that we'll be discussing as part of the HIV cure research discussion this afternoon. Today's meeting focuses on having conversations with patients and advocates, and Sara Eggers will guide us through that and give us a little more information on the ground rules as we course through the day. And you will also notice that my FDA colleagues are sitting to my left here, and they will be here listening carefully to the discussions and occasionally asking clarifying questions as we go through the course of the day. And I thought also at this point what we would do is we would ask folks at the table to introduce themselves, and I'll start with Sara, and then we'll work our way down the table. DR. EGGERS: Again, my name is Sara Eggers, from the Office of Strategic Programs in the Center of Drug Evaluation and Research. DR. MULLIN: Good morning. I'm Theresa	

16
 products that are approved. Critically important to the overall process and development of new medications is the collective work and participation of researchers, drug developers, patient communities, and patients all coming together to advance the field and the study of new agents for HIV care. So with that, I want to thank all for joining us and we look forward to a productive day and discussion and opportunity to listen and to learn from
 10 the comments that we hear. And I will now turn it 11 over to Theresa Mullin, who will talk to us a little 12 bit more about the Patient-Focused Drug Development 13 activities. 14 Thank you all. Overview of FDA's Patient- 15 Focused Drug Development Initiative 16 DR. MULLIN: Thank you, Ed. And thank you 17 to the people who just pulled my slides up. 18 So good morning. I'm Theresa Mullin, you 19 know that already, but I am going to talk about this 20 Patient-Focused Drug Development Initiative overall, 21 and this meeting is the second that we're having under 22 this initiative that we're beginning under PDUFA V,
17
 and I'll say a little bit more about that, and we plan to continue this effort. We're in sort of a learning mode generally about this process that we're using to get input as well as learning in this case today about the questions that we're asking in particular for patient input related to HIV drug development and cure research. So just to go on a bit here, this Patient- Focused Drug Development Initiative is connected very closely to an effort at FDA and CDER to develop a more formalized framing for benefit-risk assessment for new drugs, and, of course, FDA, in any decision making related to marketing of drugs, weighs the benefits against the risks to determine whether or not the drug can be approved and put on the market. And that benefit-risk assessment framework includes the severity of the condition, the degree of unmet need and we just consider those two components, severity of constitute the clinical context, and we recognize that patients have a unique and pretty critical perspective on FDA's understanding of that clinical context.

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	18			20
1	Patients are the ones who take the medicines, will get	1	to pick the diseases because one thing we did hear	
2	any benefit that can be gotten from it, will also		from patient groups is concern that we are doing so	
3	suffer all the risks, so we really need a better		few.	
4	understanding.	4	I mean, there are so many diseases and 20	
5	We have some ways to obtain that kind of	5	doesn't sound like a big number when you think about	
6	input today through an advisory committee, but that's	6	how many diseases there are for which drugs are	
7	usually on a particular drug, and through our patient	7	developed, but we try to develop criteria. I'll tell	
	representative program, and again those are very		you in a minute what criteria we used. And we went to	
	valuable venues, but they are limited. So we are		the review divisions to ask, what disease areas would	
10	undertaking this Patient-Focused Drug Development		you nominate for public comment? We developed a list.	
11	1		We published that list in September of last year. We	
	questions that the review divisions are sort of		had a public meeting in October to get input initially	
13	grappling with or would really like to get greater		and talk about the list and our thinking. We got	
14			about 4,500 comments into the docket on this. There were about 90 disease areas identified through that	
15			6	
16	not have to help us with both informing drug		public docket process, and we went back and analyzed what we got from the public docket and from the input	
	development efforts and the review of an application		in the meeting, talked again to the review divisions	
	that comes in after we have this kind of input to			
	really have that extra insight that we may not have		in the next 3 years.	
21	prior to hearing from you. So that's why we focused	21	And so we didn't want to speak for the whole	
	this meeting on hearing from patients. When we get to		5 years, we went with the first 3, and it was based on	
	19			21
1	19 the public input part at the end, others can speak,	1	a combination of questions that are before the review	21
			a combination of questions that are before the review divisions now or that they see coming where they had a	21
	the public input part at the end, others can speak,	2		21
2	the public input part at the end, others can speak, but before that, everybody else is in listening mode.	2	divisions now or that they see coming where they had a	21
2 3 4 5	the public input part at the end, others can speak, but before that, everybody else is in listening mode. And so as part of PDUFA V, which was reauthorized last year, we agreed to have at least 20 of these kinds of meetings in different disease areas	2 3 4 5	divisions now or that they see coming where they had a sort of more urgent need to hear in certain disease areas. There were other diseases we were covering in other venues. So a variety of factors were taken into	21
2 3 4 5 6	the public input part at the end, others can speak, but before that, everybody else is in listening mode. And so as part of PDUFA V, which was reauthorized last year, we agreed to have at least 20 of these kinds of meetings in different disease areas over the next 5 years. Our review division staff are	2 3 4 5 6	divisions now or that they see coming where they had a sort of more urgent need to hear in certain disease areas. There were other diseases we were covering in other venues. So a variety of factors were taken into consideration, including what we heard in the docket	21
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	1 2	today, and diseases where there are currently no good therapies or very few therapies available. We wanted	1	This is a little bit of a work in progress; we're trying to see what's the best way to get the
		to capture a range of diseases where there was a range	$\begin{vmatrix} 2\\ 3 \end{vmatrix}$	
	4	of severity and maybe there are subpopulations that		
	5	experience different severity, perhaps the elderly or	5	people feel about it, very frank, candid input. We
	6	pediatric population, and also, as a set, we wanted to	6	hope and plan to faithfully capture that, capture the
	7	cover a wide range of disease areas and affected		words, capture the way that it's described to us,
	8	populations in this set of 20, so that went into our		provide that back to review divisions, and we're going
	9	thinking in what disease areas we chose.	9	
	10	Now, there is a very diverse set there, and	10	
	11	so each of these meetings will be designed slightly	11	
	12	differently. We have some standard questions that we	12	And just a little bit more about the format.
		had patients help us develop. We periodically have	13	-
		convened patient groups who will meet with us to help	14	
		us think through process considerations related to all	15	
		these meetings. We got a lot of great input from	16	the patient population that we're trying to work with.
	17	those sessions that we've had so far, and to make the	17	So with that, I will turn it over to our
	18	questions, that are basic questions, as relevant and	18	next speaker. And we're really looking forward to
	19	kind of meaningfully worded as possible going in to	19	hearing your perspective today. It will be very
12	20	talk to patients, but we heard from patients in those	20	helpful to us going forward in this area.
2	21	meetings that we have to make sure we modify the	21	Thank you.
12	22	questions to fit the special considerations of the	22	Background on Current HIV Treatment
		23		
		disease that they are experiencing and also the	1	DR. STRUBLE: Thank you. My name is Kim
	2	disease that they are experiencing and also the questions that reviewers in particular wanted to	1 2	Struble, and I am going to be giving you a background
	2 3	disease that they are experiencing and also the questions that reviewers in particular wanted to cover. We've modified the questions today along those	2 3	Struble, and I am going to be giving you a background on current HIV treatment, a very brief background, to
	2 3 4	disease that they are experiencing and also the questions that reviewers in particular wanted to cover. We've modified the questions today along those lines for this HIV drug development and research.	2 3 4	Struble, and I am going to be giving you a background on current HIV treatment, a very brief background, to put into context the discussions that will occur later
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 improvements to existing therapy approaches. There is also continued development of novel therapy approaches, and this is really the focus of today's meeting, because your input and perspectives really help us and hopefully industry and academia to move the drug development process forward. As we all know, antiretroviral therapy has benefits, and today's treatments are highly successful. And the recommended treatment is three or more antiretroviral regimens, and the benefits of this treatment is that people are living near normal lifespans and it's being treated as a chronic disease today. And there have been significant improvements in the last several years for these treatment regimens. And the picture on the left shows a handful of antiretrovirals, it's what patients used to have to take, and, today, the picture on the right shows the simplified dosing regimen. So many patients have available to them one pill that's a complete regimen that they can take once a day.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	resistance. So input and perspectives that we hear today will also help foster, hopefully, additional drug development to deal with some of these issues. So we do want your perspectives. And the topic for this morning's discussions are going to center around current HIV treatments and your most significant symptoms. We are definitely interested in your input on, what are you currently doing to help manage your HIV symptoms? How well does your current treatment treat your significant symptoms? What are the most significant downsides to your treatments, and how do they affect your daily life? And what specific things do you look for in an ideal treatment to manage your condition? And with that, I am going to turn it back over to Sara Eggers, who is going to give us an overview of the discussion format, and we are very much looking forward to your input today. Thank you. Overview of Discussion Format DR. EGGERS: Okay. Now the work begins. I want to thank my colleagues for setting the context. And now we're going to look for the patients and	
	comes with many side effects, mey can be both short-	22	And now were going to look for the patients and	
	27			29
	term and long-term side effects. The short-term effects can be some GI toxicity such as diarrhea and nausea, it can be headaches, sleep disturbances, skin changes. And there are also the long-term effects, such as body changes, kidney or liver or heart or bone effects. And antiretroviral therapy can affect the quality of life, and these side effects of this therapy can worsen over time. We know that there are downsides to taking therapy because we recognize it takes a lot of energy and commitment to adhere to a lifelong treatment. And we know that people get fatigued, they get fatigued from having to take medications every day. They also get fatigued from having to live with a lifelong and long-term condition. And the natural response is people may not want to take treatment anymore. But we do know from recent studies that show that taking pill holidays or stopping and restarting your medications can result in serious health risks. Therefore, it's important for all of us to find ways to take medications daily because we all know that suboptimal adherence could lead to loss of virologic response and	2 3 4 5 6 7 8 9	patient representatives to provide the real input. And when I say "patients," when we all say "patients," we're using that as a shorthand to be people living with HIV; and "patient representatives," we're using that as a shorthand to be caretakers, loved ones, advocates who speak on behalf of patients and who can really kind of directly represent the points of view of people living with HIV. So the discussion will be rather different from the types of government-sponsored public meetings that you may have participated in. And as Dr. Mullin described, today's questions and discussion format were developed based on a standard structure for the Patient-Focused Drug Development meetings. This morning, we will focus on the current landscape of HIV and its treatment, and we're going to break this morning's discussion into two parts. We'll first focus on HIV treatments before the break, and we're going to include discussion on what are the good things about today's treatments and what are the downsides. And then after the break we'll focus on the most significant symptoms that HIV patients	

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1	experience because of their HIV infection or because	1	is an experiment. We will be periodically inviting	
2	of the treatments that they take to control the		those of you in person and those of you on the web to	
3	infection.		respond to specific polling questions. The purpose	
4	So I'm going to spend a few minutes just to		here is really to aid the discussion to see how many	
5	go over the discussion format and some important	5	participants share a particular perspective. So the	
6	ground rules to ensure an effective and fair dialogue.	6	in-person participants will use the clickers, and	
7	And at this point, I'm going to ask the	7	we'll practice that in a minute, and those	
8	folks who are serving on the panel discussion for the	8	participating by the live webcast can add comments	
9	morning to work their way up to the front and take a	9	through the polling questions that will be up on your	
10	seat. And I'm also going to ask for the clickers to	10	screen at the appropriate time.	
11	y i i	11	We do have a lot of people participating on	
12	1	12	the web, and this meeting is your meeting as well.	
13		13	Those participating can add comments through the	
14	So we are first going to hear from a panel	14	webcast comment box, and again we would ask for the	
15	of patients and patient representatives, and the	15	comments to come primarily from people who identify	
16	purpose here is to really set a good foundation for		themselves as patients or patient representatives.	
17	1	17	This meeting is being transcribed, and we	
18			have many people on our team taking detailed notes, so	
19			8 , , 8	
20	advocacy. They have each prepared some minutes of	20	There are a few ground rules that we'll	
21	comments in response to the questions. And after we	21	ensure that this meeting adds the most value to FDA	
22	hear from them, as long as time permits, we will have	22	and to the patients and patient representatives and to	
	31			33
1	31 follow-up questions for the panel, and my FDA	1	all the others listening here today.	33
1 2		1 2	all the others listening here today. We are first and foremost here to learn	33
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2	follow-up questions for the panel, and my FDA colleagues can help ask those questions.	2	We are first and foremost here to learn	33
2 3	follow-up questions for the panel, and my FDA colleagues can help ask those questions. After the panel discussion, we will broaden	2 3	We are first and foremost here to learn about the perspective of people who have this	33
2 3 4	follow-up questions for the panel, and my FDA colleagues can help ask those questions. After the panel discussion, we will broaden the dialogue to include other patients and representatives in the audience, and I hope that if you identify as a patient or patient representative,	2 3 4	We are first and foremost here to learn about the perspective of people who have this condition, who live with HIV, so I'm going to ask all the patients and patient representatives to contribute.	33
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1	we hope to have the discussion flow building off on		1	I thank them for contributing their time.	
2	what people say. So since you don't have to come and		2	We do want your feedback on this meeting.	
3	stand in line at the microphones, we really hope that		3	Participant feedback is very important. And we have	
4	when you have a thought and it comes to mind, that you		4	evaluation forms that I believe are at the front	
5	can say it as the discussion is flowing and we'll have		5	table, and if they're not up there now, then they will	
6	a really good flowing discussion today.		6	be during the breaks or at lunch, and we really	
7	If we don't get everyone's full thoughts on		7	encourage you to grab one of those evaluation forms,	
	a topic, we strongly encourage you to elaborate on		8	completely voluntary, and submit them to the front	
	your comments in the public docket, and our meeting		9	desk and provide your feedback.	
	web page has that information on how you can		10	Above all, courtesy and respect is paramount	
	contribute, and we really encourage everyone, even if		11	and so critical to a discussion like this. Our goal	
	you're here today, to follow up and to elaborate on		12	today is really to enable a fair and open discussion,	
	what you share today through the public comment so		13	so please wait to be acknowledged before speaking,	
	that we can review those comments as well.		14	speak into the microphone, and if you feel	
15	Our discussion today will focus on the		15	comfortable, we ask that you also just state your	
	common ground regarding the symptoms, impacts,		16	first and last name so that our transcriptionist can	
	treatment, and research regarding HIV. We understand		17	capture that, and we can put that into our	
	there are other important issues to ensuring that people with HIV get the health care treatment and		18	transcription. Of course, avoid negative and derogatory	
	support that they need, and those are very important		19 20	language. I don't have to say that here. And keep	
	issues. For our facilitated discussion today, we want		20	all side conversations to a minimum, and if you have	
	to focus on the questions that are being asked, the			to take a phone call, please do so out in the hallway.	
22	to rocus on the questions that are being asked, the		22	to take a phone can, please do so out in the hanway.	
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1	topic that FDA needs the most input on today.	35	1	If at any point you need to get up, feel	37
1 2	topic that FDA needs the most input on today. Our discussion may touch upon specific	35	1 2	If at any point you need to get up, feel free. I said the restrooms are located behind the	37
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2 3	Our discussion may touch upon specific	35		free. I said the restrooms are located behind the	37
2 3 4	Our discussion may touch upon specific treatments; however, the discussion of any specific	35	3	free. I said the restrooms are located behind the cafeteria down a pretty long hallway. And we'll be	37
2 3 4 5	Our discussion may touch upon specific treatments; however, the discussion of any specific treatment should be done in a way that helps to	35	3 4	free. I said the restrooms are located behind the cafeteria down a pretty long hallway. And we'll be taking a break at some point in the middle of our	37
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	and greater? (Answering question.) DR. EGGERS: Okay, great. It's nice to see that we have our distinguished guests here today. All right. Can we move on to the next question? Are you male, female, transgender, or prefer not to answer? (Answering question.) DR. EGGERS: Okay, good. A pretty balanced	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Because of HIV or Its Treatment Panel #1 Comments on Questions 1 - 3 DR. EGGERS: So with that, let's start with the first panel discussion to give a few remarks. And I'm going to introduce them. We have David Brakebill. Did I pronounce that right, David? MR. BRAKEBILL: Close enough. DR. EGGERS: Okay. I'm a little bit better with last names than I am with drug names, but still not perfect. We have Melanie Reese. We have Joseph Jefferson, from the oh, Joseph, can you I forgot my notes up here. MR. JEFFERSON: I'm Director of Advocacy and Alliance Development with Health HIV, and I'm also a patient. DR. EGGERS: Okay. And we have Catherine Connor, from the Elizabeth Glaser Pediatric AIDS Foundation. So we're going to start with David, and if you could just give a few remarks that answer let	
11 12 13 14 15 16 17 18 19 20 21	those who do. And I'm going to give my personal thanks to those living with the condition. It can take a lot of courage, and we really do thank you. Can I ask on the web, can we get the sense of how people are living with HIV? MS. FURIA-HELMS: About 92 percent. DR. EGGERS: Okay. Great. So we really MS. FURIA-HELMS: Oh, I'm sorry. It's the opposite. I'm looking at the wrong one. Six percent or 7 percent. DR. EGGERS: Six percent. Okay. Okay. So we are listening to you as well, even if your comments	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	me get to the questions. Again, we're focusing this first part on treatments to manage HIV. So what you're currently doing to help manage your HIV, what you see as the greatest benefits of those treatments, and the most significant downsides to those treatments. MR. BRAKEBILL: Well, besides the usual HIV treatments, because of advanced age and other comorbidities, I also take a daily dose of Lipitor. I'm on lisinopril for high blood pressure, and I do as much as possible with diet and exercise to try to control symptoms as well. Probably the biggest challenge that I think a lot of people have is access to alternative therapies. You know, depending on where you live in the country, sometimes you have access to those and sometimes you don't. So I think that's something that's been proven to work in a lot of instances, but it's not always available to folks. Go into A and B as well? DR. EGGERS: You can keep going. Do you have any	41

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1	MR. BRAKEBILL: So the specific symptoms	1	will share her experiences.
2	that my treatments address, obviously, the high blood	2	MS. REESE: Yes. And you asked him to
3	pressure, the high triglycerides. One of the things	3	identify who he was?
4	that I recently found out that I'm sort of waiting to	4	DR. EGGERS: Yes.
5	see if some of the symptoms I've been experiencing,	5	MS. REESE: Okay. I'm a consumer. I live
6	about 3 years ago my physician changed by regimen.	6	with HIV, but I'm also a patient advocate, a patient
7	When he changed my regimen, he didn't change my	7	educator, community health planner. I'm a caretaker,
8	Lipitor, which was contraindicated with Prezista, and	8	a lobbyist. I wear many hats. Okay? And I was
9	so about 3 weeks ago I go to the pharmacy to get my	9	diagnosed in 1999, and I began taking antiretrovirals
10	prescription, and I noticed it's a smaller pill. And	· ·	in 2004. I asked to get on it because according to
11	so even 3 years after being on a contraindicated		the CDC guidelines at that time, 350 T cells or less,
	regimen, it took a pharmacist to say, "Whoa, you		they recommended. But that was before name-based
13	shouldn't be taking this."		reporting. I didn't want my name to get on the books,
13	So even though I consider myself pretty		just my unique identifier, so I asked to get on
	savvy about the treatments that are available, that		medications because I had been on medications all my
	was one that got past me. So I'm kind of sort of		life, and I've had chronic illnesses since birth, so
10	waiting to see if some of the muscle aches and those		what's another pill or two or three or whatever to
18	kinds of things that are indicated as side effects of		keep living?
19	stating will subside as the treatment sort of adjusts	19	So I've been on medication for 9 years. I'm
20	itself.	20	
20	As far as how long I've been on treatment, I		three pills, and then it wasn't even 3 years later, it
	started in 1999. My first regimen was AZT/3TC before		went to two, Truvada and Sustiva, and then now I'm on
22	stated in 1777. Wy first regimen was AZ 1751C before		went to two, Truvada and Sustiva, and then now Thron
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2 3	they were Combivir, and Viracept, which if anybody was around Viracept, not one of the ones we use much anymore at all. And then I switched to Crixivan and	2 3	regimen. And my viral load never got higher than 6,500. And so the next visit, I was suppressed and
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 it's a combination plus. I take dicyclomine for my stomach issues pain. I have GERD. If anybody doesn't know, t gastroesophageal reflux disease, and so I have to omeprazole. I take Lipitor, I take QVAR, I take ProAir, I take I'm bipolar, so I take Zoloft, an used to take Depakote for mood, but since I hav concussion, had a seizure, brain surgery and all, had to take Depakote away and give me Keppra long name because it's I don't know if it's generation or what, but "Keppra" I can pronounce. So I have chronic pain, I cannot take anything for pain other than if it gets too severe, can take Tylenol, but I have stomach issues whe lining gets very thin, and just so that it won't rupture, I can only take that periodically. So I ju have to grin and bear it. DR. EGGERS: Well, we will have a lot of follow-up questions, I think, after the break on H you manage all of that, but thank you so much f sharing that. Did you have anything else you we 	that's 3 that's 4 that's 4 the 5 d I 6 e a 7 they 8 . It's a 9 eric 10 . It's a 9 . It's a 9 eric 10 . It's a 9 . It's a 9 eric 10 . It's a 9 . It's a 9 of 13 ware my 14 ust 16 . off 18 now 19 or 20 anted 21	 7 also come and give a voice also to those of us that 8 are now I'm well situated in and many others are about 9 to enter the new sort of emerging demographic of 9 interest, which is, of course, the over 50 population 1 with HIV, and, of course, most everybody in this room 2 knows that in 2 years more than half of all folks 3 living with HIV will be over the age of 50, and I 4 think that presents a whole wide variety of challenges 5 both in the clinical trial setting as well as in 6 adherence issues, which is a big concern of mine that 7 I'll get more into in the facilitated discussion later 8 because I think that there are some things that we 9 need to press forward on as it relates to tailoring,
1MS. REESE: Go ahead and move on bec2DR. EGGERS: We'll move to Joseph.3MR. JEFFERSON: Well, I just have to st4by saying when I read the questions that were5disseminated, I sort of had to ask myself if I was6appropriate candidate to speak. That's perhaps7because my status yields a somewhat boring ana8I have been positive for 25 years, asymptomatic9years, virally suppressed for 25 years. In the eat10years, there were a number of meds that came an11I've been on a fairly consistent regimen for the I128 years. I get sick less often than virtually13everybody I know. So I'm sort of this outlier14perhaps, but I thought, after giving it a little15reflection, that folks in this room need to hear fr16those of us that are actually faring well, and I ca17really go any further on a personal level without18acknowledging the folks that stood on the steps19this building or nearby buildings 20 years ago20fighting to get in and here we are on the inside.21DR. EGGERS: Yes.22MR. JEFFERSON: So I thank them. I th	tart 3 tart 3 tart 3 tart 3 tart 3 tart 4 tart 4	 happy to participate in the discussion. Thank you for having me. DR. EGGERS: Thank you. And then I'll move on to Catherine Connor, who will provide we have asked her to sit up here and provide the pediatric point of view to make sure that very important population is represented today. Thank you, Catherine. MS. CONNOR: Thank you. And I have the unenviable position of trying to describe what the pediatric population is now. You know, it used to be very easy to say, especially when you look at the legacy of Elizabeth's Foundation of what the fight looked like, and now you have to remember that pediatric covers a wide range, and when you talk about managing symptoms and the drug regimens when you go from a neonate to the youth and teen years, even into college now, it's really a diverse population, and the

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sometimes you forget that especially with the younger children, you have somebody else who is involved in this, which is the caregiver, and the caregiver actually has a lot, and they have differing opinions than the patient as to how to manage the symptoms and what needs to be done. And so I think that it's important with this group in particular to think about how the drugs are administered, how tough the adherence is for the different age groups in particular. When it comes to the impact of the side effects, you actually don't see necessarily more side effects in children than in adults when it comes to using these drugs, but the impact of the side effects on young people and in children can be very dramatic. Before this meeting, we actually worked with AIDS allies to talk to some of the beneficiaries and the families that we work with, and it was interesting, when you talk to both the children and the young people and their parents, some of the ones that came to the top were some of the night terrors and insomnia. You know, if you're a 6-year-old or 7-year-	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	organs. We have a number of families that we work with that now, being a 20-year-old who has had HIV since they were either perinatally infected or infected as a youth or a young child, really are getting more and more of the type of things where they have to worry about the impact of a lifetime on ARVs, what it's done to their bodies, and how they continue to live, and again acknowledging sort of the different side effects as these kids grow up. When you talk to these families and these young people, they actually switch regimens quite often because puberty affects them differently, and anyone who knows pharmacokinetics, you know, you really do start to have to shift and change a lot and more frequently as a child on HIV medicine or as a young adult on HIV medicine, and so they may have actually their bodies are a little bit more worn down and the side effects change as they use these drugs in different age groups. And one last well, two last points I kind of wanted to make on this topic is when you talk about managing HIV, we work with a practitioner here in D.C.
51 old living with HIV having night terrors, the impact of that on you is different than an adult, who knows how to deal with it. The same thing with some of the gastrointestinal issues that come with medicine. As an adult, you kind of know how to deal with it. As a child who is in school or a child who doesn't even really know their status because of disclosure decisions made by the adult, how they handle those side effects can be very different as well. Something that also came up in our conversations was an acknowledgement of some of the longer term impacts, and we have folks on the panel who have been addressing their status for a number of years. With children, obviously, one of my colleagues like to say it's not always the immediate side effects, you have to think about the bones, the body, and the brain, because all those things are developing at a time they're taking toxic drugs to deal with a chronic illness, and so you do see the longer term things that are still being studied, the developmental	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	who often remarks on how she has young people in their teens that are already on salvage therapy, and this is because of the very specific population who have gone through first-line, second- line, you know, there just aren't a lot of options for them, and I think that's something that's really important on the research agenda, that these kids do end up on some really harsh drugs at a very young age, and we have to keep that in mind as we start to look for better formulations with the least amount of side effects with the most effectiveness. That needs to be kept in mind. Also and I thought about holding this off for the adherence conversation, but I think it's also important to mark for this patient population is sort of how the use of drugs impacts when they transition to adult care because a lot of times the adult HIV treatment community is a little bit more lockstep, you know, "Oh, you're infected. Here is our first line. Here we go." These are folks who have complicated medical histories, they've been on a
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1	They probably know more about HIV than all of us,	1	would like to get a sense of, how many different types	
2	having grown up with it, but sometimes when they		of ART regimens have you taken? Have you never taken	
3	transition to adult care, that isn't recognized or	3	any, currently on your first, have taken two to three	
4	understood, and so a lot of times that can impact	4	different regimens, more regimens, or if you're not	
5	adherence, but it also impacts how these treatments	5	sure?	
6	affect them because there isn't this recognition as a	6	(Answering question.)	
7	young person or a child who has lived with this for a	7	DR. EGGERS: Okay. So again lots of wisdom	
8	long time when they get to that new part of the health	8	in the room, lots of experience with many different	
9	system.	9	things. Everyone has taken at least two or more	
10	DR. EGGERS: Great. Thank you very much,			
11	Catherine.	11	So we heard a lot of great things from the	
11	Do any of my FDA colleagues have a real	12	panel's discussion up in front, and I'm going to	
13	question that they want to ask to one of the panel	13	follow up on a few of those things and get more	
14	members before we move out to the large discussion?	14	feedback, and again I encourage my FDA colleagues to	
15	We'll be able to engage you guys as well. Thank you.	15	1	
16	(No audible response.) Large-Group	16	We heard a lot about the benefits, being	
17	Facilitated Discussion on Questions 1- 3	17	able to lead life with a chronic condition and living	
18	DR. EGGERS: Okay. Then we're going to move	18	it for a long time, so I would like to follow up on	
19	to the facilitated discussion. I'm going to make my	19	that a bit more, and I would like to follow up on a	
20	way out to the front, as it was called in our first	20	few of the issues regarding decision making about how	
21	meeting, "talk show style," so we'll see how that	21	you choose a regimen and how you choose to change a	
22	goes. And if we can get the next question up.	22	regimen, and then look at some of the downsides of the	
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1		1	regimens that we heard about particularly the	57
1	I can't squeeze through.		regimens that we heard about, particularly the	57
2	I can't squeeze through. Is this on? Okay. I'm going to do my best	2	complexity of that treatment that Melanie was talking	57
2 3	I can't squeeze through. Is this on? Okay. I'm going to do my best to talk into the microphone, but sometimes I get a	2 3	complexity of that treatment that Melanie was talking about, and also, David, you alluded to that as well	57
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1 that up as an important issue with the state of		1	that, "You're going to have to do this the rest of	
2 therapy today.			your life," and I think that's why you do again, I	
3 DR. EGGERS: Okay. Would anyone else like		3	know this is more an adherence issue, but it's a	
4 to comment on what they see as the real benefits of		4	different discussion with that population, and I think	
5 today's treatments?		5	that's why you see such erratic adherence issues with	
6 Yes, David.		6	that population, because that question in its own	
7 MR. BRAKEBILL: Well, I think the benefit in		7	right is sort of heart-stopping for that population in	
8 terms of particularly people who are newly diagnosed,		8	a way I don't think it is necessarily for newly	
9 you can start on a once-a-day single pill regimen.		9	infected adult patients.	
10 You know, for me, even changing regimens when I was		10	MS. REESE: I have a comment.	
11 undetectable was a tough decision because, you know,		11	DR. EGGERS: Yes. Go ahead, Melanie.	
12 if ain't broke, why fix it? So my doctor even tried		12	MS. REESE: I appreciate your comment for	
13 to convince me that, "You need to move to these safer		13	the pediatric, but that applies across the age	
14 regimens," was something I struggled with, but if I		14	spectrum because people don't want to take anything if	
15 change and it doesn't work, then am I using up one of		15	they're feeling okay, and they'll take it and then	
16 those pools of meds that I have access to?		16	somebody will tell you, "Oh, you're UD, undetectable."	
17 But I think the thing that sort of concerns		17	"Why do I have to take this now?" It's hard to wrap	
18 me at the same time is even though we have simpler		18	people I started off my life with medications, so I	
19 therapies, those of you who are familiar with the		19	know you take it regardless so you don't die. But	
20 treatment cascade, we're not really seeing any		20	most of the population, that does not compute.	
21 improvement in viral suppression. So there is		21	DR. EGGERS: Thank you, Melanie and	
22 something about how we're approaching taking medicine		22	Catherine, from the pediatric perspective. Can we get	
	59			61
1 with suppression of the virus. You know, I don't know	59		a little bit more into what you hear, the reasons that	61
2 whether it's because we're asking people to start	59	2	they give, for not wanting to be on those medications?	61
2 whether it's because we're asking people to start3 treatment before they're ready, where there is not the	59	2 3	they give, for not wanting to be on those medications? Do they, for example, say, "Well, I'll go back on them	61
2 whether it's because we're asking people to start3 treatment before they're ready, where there is not the4 correct amount of counseling and advice around that,	59	2 3 4	they give, for not wanting to be on those medications? Do they, for example, say, "Well, I'll go back on them when I need to," or do they have other reasons? And	61
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1	exhaustion. I don't think it's unique to them, but	1	would not have a significant impact on my daily life?
2	they've been on this medication for years, they've		Overall it does or would have a significant impact on
3	probably been on their third, some of them would just		my daily life, but I feel that I am able or would be
4	sort of rather not you know, we have a couple of	4	
5	families, I mean, the Elizabeth Glaser Pediatric AIDS	5	Overall it does or would have a significant impact on
	Foundation has been around for 25 years, and some of	6	
7	these families we've worked with a long time, you do	7	able to take my medications every day as prescribed by
8	see patients who just sort of throw in the towel,	8	my doctor. Or if you are not sure which of those
9	they're just a little exhausted from, again, the side	9	statements reflects your perspective.
10	effects of it, the memory lapses, inability to have	10	(Answering question.)
11	people understand what they're going through, they	11	DR. EGGERS: I've give you a few more
	would just rather not take treatment. You know, with	11	
12	other folks again, more the youth infected, again it		range. So, yes, it's a big burden for a lot of folks
	is the cavalierness of, "I don't have any symptoms,		in the room. On the web?
14	I'm taking this medication. I don't feel like I have	14	MS. FURIA-HELMS: About 80 percent said it
			does or would have a significant impact. The total N
	to." And, you know, part of this is attributable to		is 5.
17	just being young people. I mean, you know, you can	17	
18	only ask so much maturity from a certain age		DR. EGGERS: Okay. But that they would be
19	demographic, but I do think you see that.	19	able to or they would not be able to? So the middle choice?
20	And I do have one, again, a lot of the work	20	
21	that we do also is with the provider community, and I	21	MS. FURIA-HELMS: The second choice: it
22	do think that where people get their care and	22	does/would have a significant impact.
	63		
1		1	DR. EGGERS: Okay. So it sounds like it
	information dramatically impacts whether you answer	1 2	DR. EGGERS: Okay. So it sounds like it does or would have a significant on life, though it.
2	information dramatically impacts whether you answer this question one way or another. And, again, in a	2	does or would have a significant on life, though it,
2 3	information dramatically impacts whether you answer this question one way or another. And, again, in a lot of the pediatric care settings, you have some	2 3	does or would have a significant on life, though it, for many of you, would be manageable. Does anyone
2 3 4	information dramatically impacts whether you answer this question one way or another. And, again, in a lot of the pediatric care settings, you have some really dedicated professionals who are very good at	2 3 4	does or would have a significant on life, though it, for many of you, would be manageable. Does anyone want to follow up on that? And I think Randy had
2 3 4 5	information dramatically impacts whether you answer this question one way or another. And, again, in a lot of the pediatric care settings, you have some really dedicated professionals who are very good at explaining to parents and children why they need to	2 3 4 5	does or would have a significant on life, though it, for many of you, would be manageable. Does anyone want to follow up on that? And I think Randy had someone? And could you state your name, please?
2 3 4 5 6	information dramatically impacts whether you answer this question one way or another. And, again, in a lot of the pediatric care settings, you have some really dedicated professionals who are very good at explaining to parents and children why they need to take this and supporting them even in decisions to	2 3 4 5 6	does or would have a significant on life, though it, for many of you, would be manageable. Does anyone want to follow up on that? And I think Randy had someone? And could you state your name, please? MR. SCRUGGS: Good morning. My name is
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	66			68
1	community.	1	with the question is, it says, "Take my medications	
2	So I didn't know, and I was listening, you		every day as prescribed by my doctor for the rest of	
3	know, how I think one of the key things that is	3	your life." I find that just, you know, impossible	
4	misgiving in the treatment of HIV and AIDS is that you	4	for most people. You're going to miss a dose here and	
5	can't lump everybody in the same basket, and which I	5	there. I do know people that are amazingly adherent	
6	know the government has what it's supposed to do and	6	every single day at the same time, a few, but I just	
7	policies set, but they just talked about it. You	7	wanted to point out that, remember, we need really to	
8	can't take a child that was born with AIDS or HIV	8	focus on long-acting formulations so that this is sort	
9	through their mother and subject them to what you	9	of the next hurdle, I believe, that we need to get	
10	expect a hardcore drug addict, sexual promiscuous,	10	over so that we can complete sort of the	
11	heterosexual male to deal with in taking medicine.	11	antiretroviral picture and make it 100 percent.	
12	So I think what's happening here is vital to	12	DR. EGGERS: Okay. Well, Matt, I hope that	
13	what's the next step going on in the treatment of HIV	13	you bring up the long-acting formulas when we ask our	
14	and AIDS because this is what needs to take place.	14	last question before lunch, which will be: What are	
15	You need to have everybody sitting in a room and	15	you looking for in an ideal treatment? So we'll come	
16	discussing their perspective or their point of view	16	back to that.	
17	around how they feel and what do they think the best	17	Does anyone else want to follow up on what	
18	outcome would be for that particular group of people.	18	they've heard?	
19	And I was looking at the regimens. I've	19	Yes, Wanda.	
20	been on about four regimens, but what they didn't tell	20	MS. COMMANDER: I have been infected for	
21	me until later on that I found out through my own,	21	over 26 years now, and I'm symptomatic. I've had a	
22	each regimen that I've been on affected me in some	22	lot of OIs, opportune infections. And I want to say	
	67			69
1	67 type of way and it's irreversible affectedness of this	1	that the medicines today are really doing some	69
			that the medicines today are really doing some spectacular work in my life because even though I'm	69
	type of way and it's irreversible affectedness of this		spectacular work in my life because even though I'm	69
2	type of way and it's irreversible affectedness of this medication: cholesterol, high blood pressure, kidney	2	spectacular work in my life because even though I'm	69
2 3	type of way and it's irreversible affectedness of this medication: cholesterol, high blood pressure, kidney problems. So it's vital to what we have to do.	2 3	spectacular work in my life because even though I'm undetectable, I still have a very low CD4 count, and	69
2 3 4 5	type of way and it's irreversible affectedness of this medication: cholesterol, high blood pressure, kidney problems. So it's vital to what we have to do. And I was listening to Melanie, and Melanie	2 3 4	spectacular work in my life because even though I'm undetectable, I still have a very low CD4 count, and the medicines are keeping me going.	69
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DR. COX: Can I just follow up on that? I 1 general is, "Get them in, get them out," unless you're 1 2 guess I'm wondering, and we heard in some of the 2 in, you know, some specialized clinic in some big city 3 comments earlier, the issue of drug interactions that 3 that treats the whole person. That's the other thing. 4 You know, you have for HIV patients you're sending 4 seems to be an ever-present challenge both with 5 antiretrovirals and other meds. I'm curious if the 5 them here for this, there for that, you know. If you 6 panelists might be able to comment more about drug 6 have the luxury of being in a metropolitan area where 7 interactions. It sounds like I think it was David's 7 you have holistic treatment available to people where 8 comments where something sort of popped up a little 8 four or five different people are looking at your 9 bit and he didn't recognize the potential for medical records, probably the chances of that are 9 10 interaction initially. And given the complexity in slimmer, but I think in particularly small rural areas 10 11 interactions, are pharmacists pointing them out to 11 where access to care in general is an issue, that 12 you? Are physicians pointing them out to you? Are 12 you're lucky to see a doctor, that those things are 13 patients? How are those things surfacing in the real 13 sort of not looked at as closely. That's my opinion. 14 world? And any comments that you might have on that 14 DR. EGGERS: So I think both Melanie and 15 would be appreciated. 15 Joe, and we'll see if anyone else wants to comment and 16 MR. BRAKEBILL: Well, I think in my case, 16 then we'll go take a break after that. 17 you know, I mean, most doctors that are practicing HIV 17 So how about Joe first? 18 18 or infectious disease or anything are seeing more MR. JEFFERSON: I just want to amplify a 19 patients than they can handle, so part of it is 19 couple of things David referred to. So at Health HIV, 20 capacity in the system. The other piece of that is 20 we do a lot of workforce development work with 21 that this is a relatively new pharmacist. I've been 21 providers and health departments across the country, 22 using the same pharmacy for 11 years. The doctor 22 and we also do an HIV primary care survey every year, 71 1 probably, when he changed regimens, forgot that --1 we just concluded our third annual survey, and what 2 didn't look that I was on Lipitor, I mean, he's an HIV 2 we're finding is that 40 percent of primary care 3 specialist, he's certified, the whole thing, just it 3 providers are seeing HIV populations experiencing 4 never happened, and like I said, 2 weeks ago this 4 multiple conditions that they're having to manage, but 5 relatively new pharmacist working at the pharmacy 5 as we all know, through many of the reforms that are 6 flagged it, and I'm immediately going, "What? What? 6 forthcoming via the ACA, we've been doing a lot of 7 What? What? What?" 7 work in these health centers and other facilities to 8 And so I was as surprised by it as the 8 really ramp up the capacity of the primary care 9 system, but I think that's just a systematic thing. I 9 provider to provide primary care to HIV-infected 10 mean, maybe with e-prescribing and some of these 10 populations, and there is a huge shortage in the 11 things that are coming up, that are coming online, number of primary care docs that know what to do when 11 12 those things will be flagged automatically, that when somebody walks into their office with HIV or is 12 13 you're filling a prescription, and it just so happened diagnosed with HIV in their setting, and so one of the 13 14 that this pharmacist called the doctor and the doctor things that I think we need to really scale up is some 14 15 said, "Let's reduce the dose." You know, when I go really very stringent CME requirements around this. 15 16 back to see my follow-up visit in August, I'll say, 16 We're also doing some mentorship initiatives 17 "Okay, let's talk about this and see what we can work 17 where we're pairing HIV-experienced providers with 18 around." 18 HIV- naive providers to be able to provide that 19 But I think that happens, you know, in this 19 additional daily support so that when someone is in an 20 case it -- I think for a number of reasons. As I 20 exam room with somebody that's managing four or five 21 mentioned, I think HIV docs, clinicians, people that 21 conditions and they have no idea how to proceed, they 22 are working just it's -- you know, and medical care in 22 can literally pick up the phone and call the more

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 seasoned provider to get some guidance. So I think there is a lot of rich opportunity in the whole workforce arena as well. DR. EGGERS: Thanks, Joe. Melanie? MS. REESE: To piggyback on what he said about primary care providers not understanding the complexity of managing multiple conditions, I guess my neurosurgeon just fired me because he said I have too many things going on, he throws his hands up because every time he tries to prescribe something to ease something that's going on in my head or my seizures, it doesn't work with what I'm already taking for all my other stuff. So he said, "Go to your primary care and see what they can do to manage it." MS. REESE: So at one time when I was in the hospital with my brain surgery, I was overmedicated because they didn't realize that what they were giving me for my seizures and relieving brain pressure and all that stuff was counterproductive to my HIV meds and they were putting me in a critical situation, and I didn't know that was happening to me, and when I 	 going to take those drugs once approved are almost to a person have other challenges or are on other medications, and yet there is little post- approval/post-marketing follow-up that's really compelled by the FDA from manufacturers to sort of go back and study and report in some really active way what's happening with people who are taking their meds in real life who have got other conditions, because, of course, in the original clinical trials on the way to approval, those folks weren't participants. So I think it would be really useful if that happened, and I think you could hear more than from folks who are in you know, if only in a trial that's sort of looked at, just their real life experience in reporting would be really useful. DR. EGGERS: I see the follow-ups. If they're short, we'll take them now, otherwise, we can have a broadness discussion and have it after. MR. BRAKEBILL: And I think to what Dan just said, you add women, you can add transgender folks. There are a whole lot of people that are being missed in the research end that really need to be I mean,
22 I didn't know that was happening to me, and when I	22 in the research end that really need to be I mean,
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 went back to refill what I got from the hospital, the pharmacist said, "How long have you been taking all this stuff together?" and I said, "Oh, 6 weeks," and he goes, "We have to call all these doctors and figure out something." So that's a scary thing. And with ACA coming and people with an insurance card who are used to just going to emergency departments when they're on they think their death bed, they're not going to know what to do, they're not going to know what questions to ask, and doctors don't know how to speak to people who have more than one thing going on with them. DR. EGGERS: Okay. Someone out here? MR. TIETZ: Hi. I'm Dan Tietz, from Kryon in New York. I just want to add a little bit to what Joe said and then some to what Dr. Cox asked. As you know, for pivotal drug trials, pretty much they top out in terms of age at 58, 60. DR. EGGERS: Yes. MR. TIETZ: And most folks in ARV drug trials are otherwise, generally speaking, healthy, say, for their HIV disease, yet the people who are 	 1 why are women less adherent? I mean, we found that 2 again and again in some of these big prep studies that 3 women just for whatever reason don't seem you know, 4 it's the mother thing or whatever, just aren't 5 adherent to drugs as well as men are. So I think 6 there is a lot on the research end that needs to be 7 looked at in terms of if we're going to talk about 8 more effective drugs, we need to talk about targeting 9 populations in those studies as well. 10 DR. EGGERS: Okay. Then I'm going to 11 propose that we ask, when we come back, we'll revisit 12 this topic thinking about not just what an ideal 13 treatment would be but maybe what an ideal treatment 14 study will be, which I think will be a great prelude 15 for the afternoon discussion when we think about HIV 16 cure research. 17 So I want to thank you all. We'll come back 18 after a 15-minute break, so at 11:15, and we'll resume 19 the discussion just like we're having. Okay? 20 (Whereupon, a brief recess was taken.) Panel 21 #1 Comments on Question 4 - 5 Large-Group Facilitated 22 Discussion on Questions 4 - 5

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1 DR. EGGERS: Okay, if we can again work our		1	qualification on there, but these are kids who don't	
2 way up, we'll get started. And you can feel free to		2	have a lot of control over their lives, and so the	
3 if you, of course, need to leave or head out of the		3	caregivers are very much in control, but when you have	
4 room at any time, this is, as you can see, a very open		4	a school age child, they can't schedule around, "I	
5 discussion and very free flowing.		5	know I'm going to be nauseous 40 minutes after taking	
6 So we want to continue on what we talked		6	this, so maybe I'll have to miss 15 minutes of math	
7 about before the break, there were some very good		7	class." I mean, it's a real scenario for some of these	
8 points, and my FDA colleagues have given me some		8	kids.	
9 really good follow-up questions to probe a bit more		9	We have a lot of discussion with some of our	
10 into particularly managing the complex decisions that		10	older age groups about they've told us they schedule	
11 you have to make when managing your multiple		11	college classes around when they take their	
12 conditions, including HIV. And so we'll probe into		12	medications and sort of the immediate side effects	
13 that in a little bit.		13	afterwards, so there is a real sort of impact there	
14 But, first, we did have a series of		14	that I think makes more of a mark when we talk to them	
15 questions that we wanted to get from our panel		15	than some of the other ones.	
16 discussions to set a foundation for moving into a		16	And then, of course, with the significance,	
17 discussion as well in this before lunch period that		17	I think the long-term stuff is very important to my	
18 really talks about any conditions or any symptoms that		18	population, some of the bone density things that have	
19 are the most significant or conditions that you		19	happened with some of our longer term patients as well	
20 believe are associated with HIV infection that really		20	as obviously the fat distribution issues. Again, the	
21 have the most significant impact on your life. And we		21	younger population is a little more vain, I don't	
22 heard earlier the range of things, you know, the range		22	think that's quite true, but, you know, again, there	
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1 of conditions, but maybe just now focusing on, what's	79	1	is a little bit more of a stigmatizing group that can	81
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 6 You mentioned earlier about 7 can you expand upon that a l 8 degree that's felt, that's exper 9 population that you're familia 10 affects? 	resting that you have by administration when opulation. ask a follow-up question? the night terrors. And ittle bit and maybe what ienced, in the ar with and how it tate to only because the they're also told by ar than I can. But, no, uppens frequently. And arted when he was young , and he's almost 30 now. d they just wake up ht terror any better shakes them, and it's t's part of their licine they're taking.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	components of a cocktail and not the third. But night terrors. And my worst thing is even after I'm postmenopausal, and so I had the hot flashes and night sweats, but several of my conditions have those, so it's compounded, so at any moment I can feel like I'm going to just burst into flames and disintegrate, and then not long after be so cold to the bone that there isn't enough heat or blankets or clothes that I can put on to be warm, and there is no rhyme or reason to that. And so that's the worst thing for me. And then, you know, add my seizure syndrome and brain surgery and all that, I can't drive, so that's one element of mobility. And then I have balance issues because with the trauma to my head, I have ringing in the ears, whooshing and pulsating and whatnot, and I have vertigo. MS. REESE: So those things are the worst things for me. DR. EGGERS: Okay. Joe, would you like to follow up? MR. JEFFERSON: As I said at the outset, I'm	
	83			85
 you had that regularly, there that we've worked with who factor on going off of medica traumatic for that age group. specificity, I probably can't s DR. EGGERS: Okay. helpful. Thanks. MS. REESE: Can I sa DR. EGGERS: Sure. MS. REESE: Night te Sustiva, anything with Sustivity the age spectrum because per D, you know the impact of 3 strangeness of how things Sustiva in it, and they said, w would diminish. It doesn't. also been programmed from regardless because you want life. So that wouldn't be an e know a lot of people who hai it and didn't tell their provide was a separate pill. They wo 	it could be a deciding tion because it is so But as far as the peak to that very well. Well, that was very y something about that? rrors and bad dreams, ra in it, it goes across ople refuse it's 4-D, 5- D, the vividness and the you're Atripla has vell, after a while it I have them. But I've birth to take medicines to live and experience excuse for me, but I d to stop that or stopped rr, especially when it	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	so boring, I don't have a lot of these problems, and so I don't take it for granted, and I recognize the challenges. UNIDENTIFIED MALE SPEAKER: That's great. MR. JEFFERSON: Yeah. And so certainly I'm aware of the science, I know what's coming, and I'm concerned about that. I suppose my public health orientation keeps pointing me to sort of the structural problems. I mean, we can sort of get at what's good about medicine applied optimally, but I think we have to think cross-departmentally in the bureaucracy about, what are FDA's specific responsibilities to address this whole adherence question? There are many other bureaus within HHS that have a foothold in this certainly, and we in the advocacy world as well, as well as those of us who want to sort of empower a more robust consumer accountability sort of philosophy, so there are a lot of moving parts here, but I think we have to sort of ask ourselves, what is it that's holding folks back even if the medication on their shelf is good and can work?	

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1	You know, we just finished a survey of	1	night sweats. You know, the primary driver and I	
2			think this goes back to a lot of the research that's	
3	it's a bit skewed because we find that most of the		come out in the past years is the whole situation	
	respondents are fairly seasoned consumers who are		of inflammation and, how do we control that constant	
	relatively good at self-care, but even among that		revving of the immune system that seems to put people	
6			at risk? We know inflammation is the number one cause	
7			of heart disease, which we see presenting more and	
8			more in older folks with HIV at earlier ages.	
9	population in terms of self-care. So if it's 40	9	So probably and the other sort of fatigue	
10	percent, almost half, of them are not adherent, you	10	thing is only being able to sleep 4 or 5 hours at	
	know, that speaks volumes about the larger population		night and then having to take a 2- or 3-hour nap in	
	of folks that are and this is just HIV, we're not		the afternoon, so that my clock is sort of constantly	
	even talking about all the other meds. So I just		in flux.	
	think that the whole system has to work more	14	So those are the kinds of things that sort	
	collaboratively to really come up with some	15	of keep folks who you know, I'm sort of one of	
	interventions to get people to pick up the bottles and		those people who has been on disability for a long	
17	take the pills.	17	time because at the time that that was what	
18	DR. EGGERS: Thanks, Joe.	18	happened. You know, people were diagnosed with AIDS,	
19	David, would you like to provide any	19	you went on disability, so there is sort of that	
20	comments?	20	dynamic plays out in the HIV community as well about	
21	MR. BRAKEBILL: Yeah, I think in terms of	21	those disability people and, "Why do I still have to	
22	the side effects that probably most impact my daily	22	work?" sort of mentality.	
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1	87 living, probably number one on the list would be	1	So I often think that I would like to be	
1 2	living, probably number one on the list would be	1 2	So I often think that I would like to be productive again, but then when I have one of those	
	living, probably number one on the list would be	1 2 3		
2 3 4	living, probably number one on the list would be peripheral neuropathy. You know, when you're trimming your toenails and realize that you've cut your toe because you can't feel where the clippers are going,	2 3	productive again, but then when I have one of those	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	living, probably number one on the list would be peripheral neuropathy. You know, when you're trimming your toenails and realize that you've cut your toe because you can't feel where the clippers are going, and there aren't really, in my experience, a lot of really good treatments on the market for that that are labeled for use in people with HIV, let's put it that way, and so I think the FDA probably could look at some of the treatments that are available for, say, people with diabetes that are approved for diabetes treatment for neuropathy but aren't necessarily approved for HIV. I know that in my experience there are doctors prescribing Lyrica for that condition, and it is working in some patients. Probably secondarily to that, fatigue. Some days I get up and I can conquer the world and do 500 reps of 500 sets of exercises at the gym, and some days I just want to lay on the couch, and I never know when that's going to be. And, again, is it HIV? Is	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	productive again, but then when I have one of those days where I can't make it quite through the day, I go, "How can I hold an 8-hour job?" And I think the other dynamic that has to be continued to look at in research and in terms of medications, too, is we know that depending on your nadir in terms of your T cell count and/or your viral load, you know, how high your viral load once was or how low your T cells went, that outcomes are different for people. So success in viral suppression and things like that are a lot dependent on where you started treatment. So that also needs to be considered in terms of, can we find more effective treatments for people who have an AIDS diagnosis versus people who simply are HIV-positive? Because we tend to have better outcomes with people who have never experienced an AIDS diagnosis, and I think that while there has been some study, I think there	

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3 4 5 6 7 8 9 10 11 12 13	Yes, Ilan. DR. IRONY: Yeah. I wanted to follow up on something that David just touched upon, but Matt and Wanda also alluded to, which is the immunologic non- responders, people that have virologic suppression or undetectable viral load but have no rebound of CD4 counts. And since the topic here is about symptoms or	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	there was a long time before I could get to UD, it wasn't until about 5 years ago after taking all the different medications and having all the different side effects. I developed some type of resistance to many medicines over the years. I'm on a salvage regimen, and I'm not doing as well as I want to do as far as physically, but mentally it can cause you to feel depressed a lot, and some people have to go to see a psychiatrist, who take medications for that, so I, in turn, decided to do that, and that's allowing me to feel a lot better knowing that my CD4 count is so low and that I'm still undetectable. I know that it seems like it should have rose with the different medicines over the years, but it has never, it's gone as high as 3 something, but it always drops below 200 and stays that way. I probably could go on and on and on, but right now it's an emotional time for me right now. I'm feeling it because I know that I push myself every day to do things that a lot of people would take that chronic illness and just lay down and not do anything.	
1 2 3 4 5	that have any impact on your life as you experience	2 3	I get involved in a lot of groups, I go to a lot of organizational functions, and even here, I live in Baltimore and I'm here in D.C. today, but that's only through the grace of God that I'm able to do what I do, do. I'm thankful and I'm grateful.	9
6 7 8 9 10 11 12 13 14 15	MR. BRAKEBILL: I think anybody that DR. EGGERS: Let's give Wanda a chance because she hasn't had too much, so if we could bring a mic up to her, and then we'll come to David. Oop, I don't think it's on yet. UNIDENTIFIED MALE SPEAKER: Here you go.	9 10 11	DR. EGGERS: Thank you, Wanda. We're going to come back to the question, the issue, of HIV as a chronic condition, so, Wanda, we will be revisiting that topic. But I do want to follow up on Ilan's question and let David, did you or anyone at the panel have anything to respond to, to Ilan's question? MR. BRAKEBILL: Well, I just want to be clear exactly what it is that you were asking. I think what you were saying is how quickly your immune system responds has better outcomes? In other words,	
16	the time now. I'm vulnerable because with a low CD4	16		

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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	of the purview of just the FDA, but in terms of, you know, we continue to see 50,000 new infections a year, we continue to see younger people infected, we continue to see all these things that, you know, it's just frustrating as a person living with the disease. You know, vaccine studies, you know, takes us 30, 60, 90 years sometimes to develop a vaccine. You know, it's just frustrating that science doesn't move as quickly as we want it to, and I'm sure that happens to you guys all the time. But I think a lot of it in terms of how people get over you know, it's really about the individual and how they deal with their diagnosis. A lot of it is psychosocial support. You know, in a lot of the comments today I continue to hear, although I	2 3 4 5 6 7 8 9 10 11 12 13 14 15	you've all said up here at the panel, which is Kimberly gave in her opening presentation, and we've made remarks otherwise, that HIV being this manageable chronic condition, and the question is, do you view that, especially if you have other chronic conditions, do you view HIV infection as a chronic condition like you view the other types of conditions that are considered chronic as well? If anyone would like to comment. Maybe we'll start with Melanie and then if anyone in the room wants to comment. MS. REESE: Okay, because I am someone who has a multitude of chronic conditions, I would never, even though I'm well managed, and that's not the object of concern for all my medical providers, is HIV, it just irks me when they lump it into a manageable chronic disease because there are so many factors that aren't just medical that come with HIV: fear of rejection, toying between, "Do I disclose? When do I disclose? Who do I disclose to?" It's not	
	medications, around disclosure, around everything. So I think that still I don't know I mean, we've	20 21	When do I disclose? Who do I disclose to?" It's not talked about enough in community intelligently, too	
21 22	been talking about stigma for 32, 30 years now into		many people are still ignorant, people still think,	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15	So I think that certainly there are advantages to people, depending on where you're diagnosed in the disease progression, and I think it's been proven that outcomes are better for people who have never fallen below 200 T cells, for example, or haven't had viral loads above a million. And I don't know what the answer is to stop all of that or improve all that except that, you know, trying to get people and engage them in care. Hopefully in states unfortunately, mine is not one of them that have	2 3 4 5 6 7 8 9 10 11 12 13 14 15	breathing and engaging in sex and you're not doing and using safer sex practices, you are at risk, and until that mindset can incorporate this world, we're still going to be in trouble, we're never going to get to zero. DR. EGGERS: Would anyone else like to comment on their view of HIV as a chronic condition? Nathaniel. MR. SCRUGGS: I listened to Melanie, and I take a different set. I don't personalize it because	
16 17 18 19 20 21 22	more people have access to care and get into care and probably try to solve some of this. DR. EGGERS: Thank you, David. So Debra asked me a question at the break, and I'm going to ask it as a follow-up question here,	16 17 18 19 20 21 22	today it's manageable for me, but I had to get to that place. And I think what happens and like I said earlier, in the whole of our society, our society and the way we advertise has a big impact on how children, on our cigarette smoking, on sodas, on our sex lives, and I think what happened for me, a lot of the medical conditions I got now I didn't have, at least I didn't	

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2 3 4 5	know I had them, because I wasn't going to the doctor, but I'm able to manage my HIV very well. And I was listening, I don't know how many people that I know, and I don't do it, some days I do miss my medicine, that's just me, but as far as it being manageable, yes, my HIV is manageable, to the place that when I go see my primary and we discuss some of my other conditions, my HIV is not at the forefront of our conversation. When I go see my infectious disease doctor, my HIV is not the primary conversation. So I take that that it's manageable. My T cells are superb from when they were single digits in 1996. I'm like over 1,000 now, but I understand why, because all my T cells are not valid. My viral load is not fully undetectable. It's low, but HIV is not physically affecting me as much as it does some days mentally being concerned about, will I continue to keep insurance? If I happen to lose my job, will I be able to manage my lifestyle? Will any of the opportunistic infections reoccur if I don't	11 12 13 14 15 16 17 18 19	Different people, they do manage their HIV, and it comes not just from a physical point. And it has to be looked at in threefold. DR. EGGERS: Thank you, Nathaniel. We have another comment. Matt Sharp? MR. SHARP: Just what about chronic inflammation? That's been brought up already. You know, this may be considered a chronic manageable disease, but what I worry about and what many people are worried about as we grow older is the inflammation that has not been controlled by antiretroviral medications. Certainly, we know that it's controlled to a point, but there is still that low level inflammation and consideration of what may happen in terms of heart disease, bones. And then the second thing I wanted to bring	
21	take my medicine?		We haven't really talked a lot about that today. And	
22	So it's other things that play into, and you		I don't think we know, and we won't know until we get	
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2 3 4 5	can't look at HIV from just a physical standpoint. Melanie just spoke to that. You've got to address HIV in the realm of a person's mental capacity, what the emotional and spiritual support they have, and how physical they are. I heard David talk about how he can go to the gym. I don't trick myself. I ain't going to the gym. I do a lot of walking. That's my exercise. And I commend people that can go to the gym and do all that, but I had to learn how to fit my life where it best suit me for the information I have at that time. Melanie just talked about how, you know, the stigma David just talked about how the stigma is still happening, it is, but why is it happening? Why aren't people listening to the facts? If you're having unprotected sex, you use protection and you won't have it. I tell people all the time, guys, women, if you're going to have unprotected sex, the quickest way to let somebody put on a condom is tell them, "I like you, I want to have sex with you, but I don't want no babies." DR. EGGERS: That's a good point.	10 11	DR. EGGERS: Okay. Go ahead, Joe. MR. JEFFERSON: I just wanted to also point at two things. I think it's important to distinguish are we distinguishing between a manageable disease and a clinical under a clinical sort of rigor in terms of lifestyle and sort of other comorbidities? Because I think if one has their HIV in check and yet the HIV is the precursor to all of these other conditions, is HIV actually a manageable condition? I don't know. I'm also concerned about the impact that the whole messaging of a manageable chronic disease sort of portends for the prevention efforts that we're all engaged in because we, I think, know that for those who are infected, they might hear that and think that, again, "I'll deal with it when it's a problem, I don't have to take meds until that time," or for those who are not infected, of course, it diminishes a sense of urgency around practicing safe sex. I think from a	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	down on the sort of volume of urgency because now we can move to another disease state that maybe isn't manageable because we've now got HIV in we can check that box and move on. So I'm concerned about us locating too much emphasis on this notion of manageable disease. DR. EGGERS: Thank you very much. I want to make sure that we get to the ideal, not cure, the ideal treatment question, and I'm going to broaden, like I said before the break. Actually, can we go back to the presentation slides and not the question slide anymore? Yeah, thank you. Because we'll close before we let my FDA colleagues speak, really getting your final thoughts on what major improvements could be made for future treatments	2 3 4 5 6 7 8 9 10 11 12 13 14 15	have been there for years, but if you live in Marathon, 50 miles up the road or up the Keys, your doctor comes and sees you once a month. If you live in Sebring, which is smack-dab in the middle of the state, there is a nice health department that offers lots of HIV care, but specialty care? You know, unless they find something therapeutic in gator hunting, there is probably not much to be offered there. So I think that as the model moves, I think there is going to be less and less available in terms of even in the larger metropolitan areas. I know they're already feeling the pinch of reduction in Ryan White funding, but it's just not something that's available, widely available. Personally, I believe in it. I think it has a lat. We actually have written	104
16 17 18 19 20 21 22	that if you want to comment on the research studies to help foster to those treatments. Theresa, do you want to follow up? DR. MULLIN: Yes. Maybe before we go on, I	16 17 18 19 20 21 22	ways to work it, but it's just not something that's	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	big challenge was access to alternative therapies, and I wonder if you could say more about what you had in mind with alternative therapies. MR. BRAKEBILL: Well, let me qualify this by saying that in many cases, particularly if you live in a larger metropolitan area, I'm speaking particularly of the coasts on either side, because of the large amount of money that tends to flow to the bigger cities in the epidemic, there is much more money available for those sort of auxiliary things like massage therapy and acupuncture and acupressure and seeing an herbalist and those non-traditional medicine sorts of things. If you're living in the rural South, you're lucky if you don't have to drive 200 miles to see a doctor to have your HIV treated. So the health disparities that continue to - - I live in Florida, I live in Key West, it was the epicenter of the epidemic. Fortunately, it's the kind	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	not accessible. And again, this goes to our whole system of care and how it works and whether you live in a big city or whether you live in rural America, if you live in the Northeast or you live in the South. So until we sort of fix a lot of things that are broken about how health care is administered and delivered in this country, I think we will continue to see health disparities, you know, across disease states depending on where you live. You know, it's economics, it's everything. DR. EGGERS: Thanks, David. Yes, Ilan has a question? DR. IRONY: I just want to follow up with what David was saying, that the same kind of health disparities we see in medical care we also see in clinical trials. We always want, in particular, for Phase III trials when it gets to the end of the preapproval development of a product to have participation of as many people as possible to reflect the real world use of that particular product, but sometimes access is a problem, access to clinical trial sites. If you live in rural Florida, for	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	obligations to have participation in clinical trials that sometimes are demanding in terms of travel or cost, et cetera. So we see that reflected in what the studies show even though we try to extrapolate as much as possible to the real use population. DR. EGGERS: Thank you. Well, that's a great segue. Let me ask if anyone wants to follow up on what they said this morning about clinical trials and other improvements that you have. Yeah. MR. TIETZ: Yeah, I think one of the other things that comes up increasingly, and not necessarily with folks who are older with HIV, although I think mostly, and it's the folks who are highly treatment experience, and the real challenge I think is the narrowing of the antiretroviral drug pipeline. There are in the last few years been a few drugs that have been pulled from development by the companies that were developing them I think mostly because they	3 4 5 6 7 8 9 10 11 12 13 14 15	there, and I think part of the incentive for the pharmaceutical industry is to follow whatever disease	
	But, you know, there is probably, you know, what, 10 percent? It's hard to know exactly, no one tracks the folks who are resistant to four, five, and six classes of drugs that are currently available, and for them, the absence of many drugs in the pipeline is frankly scary, they're running out of options. They're never nondetectable anymore. Clinicians across the country who have been at this practice for a long time, have these highly experienced folks, and it's that each of them are sort of waiting for that	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	have to put it in there and have them take it so that	109

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2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DR. EGGERS: Catherine, would you like to give any final words from the pediatric perspective? MS. CONNOR: I really sort of made the comment before. I mean, administration is always something that we really worry about because our populations are younger ones, you know, you have to use the liquid syrups, or sprinkles are a big thing, in the developing world. But also I would just be remiss if I didn't mention sort of the research lag time for pediatric drugs. A lot of the reasons it happens is very justifiable, but there is still a very long lag time between when adult ARVs are available for the younger populations, particularly the neonatal populations, which, again, may not be as much an issue in the United States but globally is a big issue. So I		2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	their comments on this most recent topic that we've been discussing. We do recognize that the pipeline for HIV drugs is not as great as it used to be, and that's why we're happy to have not only our participants here today to state the obvious, but also industry here so they can hear that there is still a need to develop drugs for HIV, new drugs, and drugs for salvage populations as well. So we appreciate all of your comments. Thank you. DR. EGGERS: Thank you. And with that, that is a great way, I think, to end the morning discussion. We're going to save some time for the FDA to give comments and questions. Did you want to say something? DR. BIRNKRANT: Now? DR. EGGERS: Let me just say one thing, because there are a few things that we didn't get to cover today, and so you have homework. Those of you in person and those of you listening to the webcast, we didn't get to talk about as much the decisions about how you change medications and why you change	
22	always sort of encourage folks in FDA to sort of		22	medications and how you choose to go to a combination	
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2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 177 18	DR. EGGERS: Great. Any final comments? Matt? MR. SHARP: Hello. So we're going to talk about this, this afternoon, obviously, but even before we get to talking about a cure, there is a step before that called a functional cure, which is using the host response to treat HIV basically without medication. So I think we'll talk about that this afternoon, I'm sure. But then the other thing I wanted to bring up is, you know, I am passionate about the salvage population because I was a salvage patient for so many years, and I know that that population has certainly decreased because of the effect of great antiretroviral drugs, but there are still people out there who fall into that category that we need to remember.		2 3 4 5 6 7 8	therapy and why you choose to go to a one pill once a day, or if you decided not to, why that, too? And so I really encourage you to go to the docket and follow up with what you've said here and address that topic and address more the symptoms that you experience and the other conditions that you attribute to your HIV infection and explain more about those. So you heard David and Melanie, for example, talk about oh, help me out with the MS. REESE: Peripheral neuropathy? DR. EGGERS: Yes and the night terrors and the night sweats and the fatigue, follow up on those and provide your experiences to that. Discusion with FDA Panel With that, I will turn it over for a few minutes. We are going to lunch in about 10 minutes, but I want to see if any of my FDA colleagues want to follow up on anything else that they've heard and if well, we'll see how long we go with that, if you want to follow up. Maybe we might have time for a question from the	

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116 DR. BIRNKRANT: Thank you. I wanted to 1 sort of convinced me was my blood sugar was starting 1 2 follow up on something David had said earlier about 2 elevate, so we did a fasting glucose and the doctor 3 fear of switching regimens if you're controlled with 3 says, you know, really this is better. 4 your viral load. I was wondering what other panel 4 But I think, you know, the whole point is to 5 members thought and if David could elaborate a little 5 get your virus suppressed, get it undetectable, so as 6 a person living with it, you've met that goal, and so 6 more on that topic. So, in other words, if you're 7 fear of change I think for everybody regardless 7 well-controlled on a regimen that may be a little more 8 complex, how willing are you to switch just because a 8 whether it's a disease state or just fear of change in 9 regimen may be somewhat easier? So do you still have 9 general, people, by their nature, are sort of 10 concerns about switching even though perhaps it may be resistant to that. 10 11 a little easier to adhere going from a few pills a day 11 Would I go to a once-a-day pill? I don't 12 to one pill a day? Is that something that would be 12 know. You know, 80 percent of our regimens have 13 attractive to you and would make your lives more 13 Truvada in them now, which makes me nervous about 14 manageable? using Truvada for prep, that's just a personal thing. 14 15 MR. JEFFERSON: I'll jump in. I've given 15 It concerns me a little bit. But I have to say that 16 that some thought. I take three pills at night. I for me, I'm a creature of habit, so taking three or 16 17 think there are four or five compounds in those 17 four pills at a time, you know, my partner looks at me 18 treatments, and, of course, it would be great to take and says, "How can you take all those pills at once?" 18 19 a pill, but this regimen is working, it has been and he says, "I can barely get one down at a time." I 19 20 working for 7, 8 years. No, I wouldn't make the 20 said, you know, when you're taking 12, you know, you 21 switch to a single dosage, a single pill dosage, if it 21 learn. And so for me, at some point in time maybe. 22 meant changing the regimen. I would prefer instead 22 For me right now where I am, it's sort of like the 115 117 1 question about, would taking all these pills the rest 1 for there to be -- and this gets back to drug 2 development -- some means by which whatever 2 of your life -- you know, I don't know whether I'm 3 combination one happens to be taking that's working 3 going to be 85 or 90 years old sitting in assisted 4 for them -- this is a little pipe dream, pipe dream 4 living having somebody force-feed me and giving me my 5 HIV meds. You know, at that point in time, I might 5 for the pipeline -- is how about a more tailored sort 6 of capacity to put together the meds I am taking into 6 say forget it. one pill at some point in the future? 7 MR. BRAKEBILL: But for me, it's not 7 8 MS. REESE: Well, for me, since I have so 8 something for right now I would do. I think it's 9 many other conditions, opportunity to change would 9 easier for physicians to prescribe now, particularly 10 have to go through all the other medications I take to 10 newly infected, you know, it's only one pill once a 11 see if those would be impacted versus -- I'm only day. On the other hand, we still have the ads in the 11 12 taking one pill for HIV, which is a cocktail, but I 12 magazines that show the guys climbing mountains, 13 take 20 others for everything else I have, so, you which, you know, some of us who have been around a 13 14 know, it's really like for me I would not change 14 while sort of push back on that when that happened, 15 unless it was a once-a- year. that, oh, you can cure all of this by taking one pill. 15 16 MR. BRAKEBILL: Well, I think for me, I 16 So the message is still that -- you know, 17 mean, the most recent change in my regimen was 17 this goes back to the chronic disease, you don't get 18 Prezista going from 600 milligrams, two 600s to one 18 diabetes from having unprotected sex with someone, you 19 800 milligram, so it's one less pill, but for me, you 19 don't get fibromyalgia, you don't get lupus from 20 know, the whole thing about even switching from 20 having unprotected sex with someone, you do HIV. So I 21 Crixivan and Combivir, Crixivan, which is notorious 21 think the fact that it's still communicable makes it a 22 for buffalo humps and kidney problems, what finally 22 little different than other chronic diseases for me.

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8 9 10 11 12 13 14 15 16 17 18 19 20	(No audible response.) DR. EGGERS: We would probably have time if there was one question or two questions for you to answer on this topic. Is there any? DR. CALDWELL: Hi. Thank you. My name is Dr. Robert Caldwell, and about 15 years ago I was involved in an HIV vaccine study. Well, it was a collaboration between the NIH, Vanderbilt, and Chiron Pharmaceuticals. And, sure enough, I got the experimental. So when I get tested for HIV, like I did last week, the ELISA comes back positive, the Western blot and the PCR come back negative, and that's been 15 years ago. So my question is, if you look at breast cancer and HER2 as antibody-based therapy and Provenge as a prostate cancer-based therapy, why aren't there currently any second-line drugs for HIV therapy? Is there a higher standard or a higher bar set for therapeutic HIV vaccines as a current treatment option?	 we can give. DR. EGGERS: Okay. So we have one question here? ROBERT: My first name is Robert. And I have a question about hepatitis C and co-infection with HIV, and I'm wondering why the FDA, and I think it's about politics, why the FDA rushed when Anthony Fauci was being pressured by AIDS activists to approve drugs for HIV, and yet they're sorting of dragging their feet, it seems to me, on hepatitis C infection. There is a new drug coming available sometime in the winter of 2013 that, you know, it's amazing, and I don't remember the name of it, but there is not the political pressure on the FDA, and you all don't seem to be responding the way you did when Anthony Fauci was being pressured by AIDS activists. So I'm wondering if you could address that as well because I do have cirrhosis of my liver, and I would like to get it treated before it turns into liver cancer on the hepatitis C. DR. BIRNKRANT: Thank you for your comment. 	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	answer that. Your question is, why aren't there therapeutic HIV vaccines? Is that the question? DR. CALDWELL: Yes, ma'am. Why aren't there more vaccines or perhaps pro-vaccine options in the pipeline? Therapeutic vaccines, not preventative; I'm speaking specifically to therapeutic. DR. WITTEN: Okay, specifically to therapeutic. I just think it's a very complex area, and even the Provenge, which you are citing, was the one vaccine that's been approved for a cancer indication following several decades of efforts of development in that cancer immunotherapy area. So I think it's really just a matter of it being a complicated effort. We certainly meet with sponsors or researchers who are interested in developing products, and we would like to see this area move along, but I think it's just a matter of the science and the technical issues involved. Did you have a more specific question? (No audible response.)	 1 who are co-infected, is a very seriously ill 2 population. We also understand how difficult 3 sometimes it is to do trials in that population 4 because we first have to learn in the beginning 5 whether or not a drug is active, and then to allow a 6 population who is taking other medications, we have to 7 do drug-drug interaction studies, so that takes a bit 8 of time compared to a mono infected or a population 9 who only has HCV. 10 I will say that the urge and the enthusiasm 11 that the division had back in the '90s with the 12 protease inhibitors is there today as well for the new 13 hepatitis C treatments. One example of that is we 14 recently modified the endpoint in clinical trials to 15 shorten it by approximately 3 months to enable us to 16 get the therapies to patients even sooner, so we're 17 quite excited about that. 18 In addition, I will share with you, unlike 19 the HIV pipeline, the HCV pipeline is quite full, and 20 we have dedicated teams working on a multitude of 21 products, not only alone, that is, single products but 22 multiple products together in fixed dose combinations 	

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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	drugs in the pipeline and we have a team of scientists and experts ready to do the review work that we've done all along and will show you in the next few years that there will be more drugs on the market for hepatitis C. Thank you very much for your question and comment. DR. EGGERS: Okay. Well, so one more, and then it's time for lunch. MR. TIETZ: I would just second that on the HCV. In fact, you can see some drug companies have moved almost their entire virology divisions to work on HCV from HIV, but it raises the thing I mentioned earlier, which is that it's all about the money, they want to be first out the gate with some product, and so it's narrowed the I mean, we're pleased with	10 11 12 13 14 15 16 17 18 19 20 21	and just summarize those as part of our afternoon opening remarks. With that, we will come back at 1:30 and we will get started with our afternoon discussion then. Thanks a lot. (Whereupon, a lunch recess was taken.) DR. EGGERS: Well, welcome back to the afternoon session of the Public Meeting on HIV Patient- Focused Drug Development and HIV Cure Research. We had a great morning discussion, and we look forward to a great afternoon discussion. For those of you who are just joining us, my name is Sara Eggers, and I am from CDER's Office of Strategic Programs, and I will be facilitating much of the discussion today. Before we get to the discussion, we will have a few welcome remarks, and then we'll set the context for our discussion and some of my FDA colleagues will present some background information. And then we'll get into the discussion. I'll go over a bit about the discussion format after that before we do.	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15	and people wait and wait. DR. EGGERS: Okay. So I think we are going to stop to break for lunch. I do want to thank sincerely the panelists who have been up here and have shared their stories, and, as sincerely, thank those of you in the audience. On the web, I am going to suggest that if you want to get some comments, if you have any comments that you would like to put in through the	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	And with that, I would like to turn it over to Dr. Janet Woodcock, who is the Center Director, for a few comments. Thank you, Dr. Woodcock. Afternoon Opening Comments DR. WOODCOCK: Thank you, Sara. And good afternoon, everyone. It's great to see the folks who have turned out for this meeting, and I hear there are a lot of people on the web. That's fantastic. I especially want to thank the HIV patients and patient advocates for sharing your experiences and your perspectives on this disease and on the therapies. Today's meeting is part of an initiative that we are running that is called Patient-Focused Drug Development. We are quite excited about this. Theresa Mullin gave an overview this morning, but I would like to reiterate some of her points especially since some of the folks were not actually able to be here this morning. As Theresa mentioned, Patient-Focused Drug Development was an important aspect of the package for the fifth authorization of the Prescription Drug User	

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$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\ 19 \\ 20 \\ 21 \\ \end{array} $	Fee Act, or PDUFA V, and it's an enhancement of our current mechanism for getting patient input on important issues regarding their diseases, which have tended to generally focus on specific drug products, and we want to focus more broadly on the disease entity. Patient-Focused Drug Development, therefore, is a broader, more systematic method of obtaining patients' perspectives on the severity of the condition and its impact on daily life as well as their perspective on the range of available treatment options and the impacts for good and for ill of those various treatment options. And we recognize that even within a disease and in some diseases this is more true than others there is a range of severity that people are experiencing often from being relatively well and functioning to suffering severe effects from the disease or from the treatment in fact, and we want to hear about that, we want to hear about the burden of disease and the burden of therapy. It's valuable for our drug review because it helps provide the clinical context in which we	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	experience that. But more broadly, we would like to have outcome measures that we devise for benefit as well that are really relevant to patients and patients feel are the right outcome measures for that disease and the burden of disease that they experience. So this is an ambitious undertaking, I think, and part of our commitment under PDUFA that we made to Congress, we will convene at least 20 public meetings over the next 5 years with each being focused on a different and specific disease area. And today is our second meeting within this initiative. Our first meeting was on April 25th, and it focused on chronic fatigue syndrome and myalgic encephalomyelitis. It was, from our point of view, very valuable, and that's a disease that really doesn't have any approved treatments at all and has a very profound effect on the most severely afflicted people. We received a lot of positive feedback from participants in the patient community who attended that meeting, they felt it was very helpful, and in that disease we're really seeking to attract drug	
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1	evaluate new treatments because we don't do that in a		development and understand what outcome measures would	
	vacuum. We say they're safe and effective but really		be most appropriate in that disorder.	
	mean the benefits of a new treatment outweigh the	3	This morning's discussion here focused on	
	risks, and therefore you have to understand the	4	the most significant symptoms associated with HIV	
	disease, its risks, and the effect of the current	5	infection or its treatment and what impact it has on	
	treatments and really do that I think partly from the	6	daily life. We also heard your perspective on the	
7	patients' point of view as well as from the medical	7	currently available therapies to treat HIV. This	
8	point of view.	8	afternoon's discussion is a bit different, and I think	
9	Patient input can help drug development's			
10	Fatient input can help drug development s	9	each meeting we have will have different flavor. It	
	efforts more broadly also by highlighting where new		each meeting we have will have different flavor. It will focus on some important issues with respect to	
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12	efforts more broadly also by highlighting where new types of outcome measures are needed to help make sure that new therapies treat the symptoms that most matter	10	will focus on some important issues with respect to cure research studies. In the past, HIV cure did not seem possible,	
12 13	efforts more broadly also by highlighting where new types of outcome measures are needed to help make sure that new therapies treat the symptoms that most matter to patients or they avoid side effects that are most	10 11	will focus on some important issues with respect to cure research studies. In the past, HIV cure did not seem possible, but today researchers are looking at new ways to	
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12 13 14 15 16 17 18 19	efforts more broadly also by highlighting where new types of outcome measures are needed to help make sure that new therapies treat the symptoms that most matter to patients or they avoid side effects that are most important to patients. And often we don't put all of these outcome measures in the trials, so we may not know about certain important impacts on patients. For example, for many diseases, we have never learned anything about impact on sexual function of some of the treatments for various diseases, and some	10 11 12 13 14 15 16 17 18 19	will focus on some important issues with respect to cure research studies. In the past, HIV cure did not seem possible, but today researchers are looking at new ways to either clear HIV from the body or control the virus without the need for antiretroviral therapies. One of my colleagues is going to provide more background on what we mean by "cure research," but understanding the patient's perspective on the potential benefits and risks of participating in HIV cure research studies	
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12 13 14 15 16 17 18 19 20 21	efforts more broadly also by highlighting where new types of outcome measures are needed to help make sure that new therapies treat the symptoms that most matter to patients or they avoid side effects that are most important to patients. And often we don't put all of these outcome measures in the trials, so we may not know about certain important impacts on patients. For example, for many diseases, we have never learned anything about impact on sexual function of some of the treatments for various diseases, and some therapies have very profound impact on sexual	10 11 12 13 14 15 16 17 18 19	will focus on some important issues with respect to cure research studies. In the past, HIV cure did not seem possible, but today researchers are looking at new ways to either clear HIV from the body or control the virus without the need for antiretroviral therapies. One of my colleagues is going to provide more background on what we mean by "cure research," but understanding the patient's perspective on the potential benefits and risks of participating in HIV cure research studies	

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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	shows that in this disorder we're in a more advanced state of treatment, say, than we are with, say, chronic fatigue syndrome, where we really don't even understand the etiology and we have no available treatments. So thank you again for your valuable time and input on HIV symptoms, currently available therapies, and I wish you luck this afternoon. I hope we have a very good discussion on both the ethics and the feasibility and desirability of HIV cure research. Thank you very much. Summary of Morning Discussion MR. KLEIN: Thank you, Janet. And good afternoon, everyone. My name is Richard Klein. I am the Director of the Patient Liaison Program at FDA in the Office of Health and Constituent Affairs, formerly known as Office of Special Health Issues. And I just wanted to do a brief overview of the main thoughts, at least that I heard this morning, and try to summarize what we heard. To me, one of the main issues that came up	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	and better adherence? And people were a little reluctant to do that if they were successful; it's kind of if it's not broke, don't fix it. Unanticipated consequences, I think people were talking about hesitancy of changing drug regimens also because of the fear of switching regimens and then using up something that would have been a future option for you to use, and so people didn't really feel comfortable with the idea of burning through different classes of drugs. So changing regimens is a difficult decision that people were dealing with, and that question about using up scarce options for future. Whether HIV is a manageable condition was a question that came up and that differed from person to person depending on whether or not you thought that the problems that you were having related to your therapy and to your HIV were part of the question. So if you could manage HIV but still had all these adverse events from the drugs, was that a manageable disease?	
21 22	To me, one of the main issues that came up and kept coming up was comorbidities, people dealing	21 22	disease? I think we were pretty well reminded that	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	not only with HIV but with HIV's concomitant problems and other diseases. So it had a lot of ramifications that kept coming up through the morning, managing hepatitis, managing hypertension, managing new drugs and drug interactions. And drug interactions was I think the second most common thought that kept arising for me this morning, people dealing with multiple drugs for multiple conditions and how to work those drugs together and deal with the drug-drug interactions and finding the right drug combinations. I think e-prescribing was raised as one potential way to address those kind of problems. Could people have electronic records that would help guide and prevent the use of drugs that shouldn't be used together that are contraindicated or that had drug-drug interactions? Adherence and ease of dosing was another issue that came up this morning, and that led to another question about challenges of changing meds. Were people comfortable with simply changing meds when you had a workable, successful therapy? Would people be able to switch to something else for ease of use	3 4 5 6 7 8	stigma is still a problem, that people are worried about diagnosis, talking about their HIV diagnosis, talking about even being on therapy, and that stigma remains a problem. And, finally, reminded about the fact of transmissibility of HIV and whether or not being a chronic but manageable disease could affect whether or not people were going to be whether or not prevention could be impacted by the ease or the alleged ease of treating the disease and the question about whether or not that could possibly undermine prevention efforts. And I think those were the top issues that had occurred to me this morning. I don't know if other people had other points, but, if not, then we want to shift gears for the afternoon and talk about the future, about cure research and where that is, where it's going. And for background on cure research, I want to introduce the Chief of the General Medicine Branch, Division of Clinical Evaluation and Pharmacology/Toxicology at the Center for Biologics, and his name is Ilan Irony. And with that, I'll turn	

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11 12 13 14 15 16 17 18 19 20 21	DR. IRONY: Hi. Good afternoon. Again, my name is Ilan Irony. Thank you very much for the introduction. And I am from CBER, the Center for Biologics Evaluation and Research. And so this is an outline of my brief introduction to the subject of HIV cure research and this is the background. And so I'm basically going to describe the FDA organization and our particular place in the FDA organization, our center and our office, talk about the strategies for research that aim towards a cure of HIV infection. I will talk a little bit about gene therapies as they pertain to HIV cure research, which is part of what we do in our office and our center, and then wrap up with combination strategies, and the ideas and the controversies in combination strategies in also HIV cure research. So first a word about the general FDA organization. We are all under the Office of the	2 3 4 5	last bullet, the Office of Cellular, Tissue and Gene Therapies, which is our review of what we regulate and what we approve in products that are primarily for gene therapies and cellular therapies. So why cure research? We heard a lot this morning about HIV infection being transformed in the last 30 years from a lethal condition into a manageable chronic condition, and that's debatable how manageable it is. We heard a lot about the comorbidities and the symptoms that remain. So the fact that it's not lethal doesn't mean that there is no unmet need for patients and caregivers and for society in general, but we have to recognize that it's been a big progress over the last 30 years in terms of transforming a lethal disease that quickly progressed to AIDS and opportunistic infections into something that people can live through medications. But still there are some drawbacks to this. There is a lifelong requirement for antiretroviral therapies with both long- and short-term side effects of those therapies, of those drugs, and we heard a lot about them, about the effects on comorbidities,	
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1	health, but I wanted to emphasize the last three	1	effects on other medications that people need to take	137
2	health, but I wanted to emphasize the last three centers here that pertain also to HIV, human health	1 2	because of complications of those antiretroviral	137
2 3	health, but I wanted to emphasize the last three centers here that pertain also to HIV, human health related to HIV. So the Center for Devices and	1 2 3	because of complications of those antiretroviral therapies. So there is a need that FDA perceives and	137
2 3 4	health, but I wanted to emphasize the last three centers here that pertain also to HIV, human health related to HIV. So the Center for Devices and Radiological Health, Center for Drug Evaluation and	1 2 3 4	because of complications of those antiretroviral therapies. So there is a need that FDA perceives and the community perceives of cure research.	137
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1	of cure is either elimination or control of HIV		1 patient in that particular research study?	
2	infection without further medical intervention to		2 And there is a challenge also in defining	
3	maintain health.		3 what is sterilizing cure, that means no detectable	
4	So what are the research strategies that we		4 virus, because, as you know, the assays for what's	
5	have seen in development? One approach is in the		5 detectable virus and what's the limit of	
6	first bullet, is the shock and kill. Shock we define		6 quantification of that has changed in whether we	
7	as activation of the virus from reservoir from this		7 consider a fragment of the virus a detectable virus or	
8	where it's latent, where the virus is sleeping, to be		8 not. Those are debatable issues in terms of	
9	awakened, to be manifested, and then followed by kill.		9 sterilizing cure.	
10	So clear the viruses from the body using both boosters	1	1 57	
11	of the immune system plus an antiretroviral regimen	1		
12	that's effective to clear the virus.	1	2 evidence of disease and no ability to transmit HIV	
13	Another approach would be the induction of	1	, <u>,</u>	
14	, , , , , , , , , , , , , , , , , , , ,	1	4 measures, so the endpoints, as we refer to in clinical	
15	be accomplished by transplantation of immune cells,	1	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
16	CD4 cells or precursors of CD4 cells, from donors that	1	6 endpoint for research and for clinical trials.	
17	are resistant to HIV, known to be resistant to HIV, or	1	e	
18	through gene therapies that modify some cells to make	1	1 91 8	
19	them resistant to HIV and then transfuse them to a	1	6 6	
20	patient with HIV.	2		
21	And a third possible approach is some	2	6 6	
22	experimental drugs or vaccines, therapeutic vaccines,	2	2 the gene subtype and the general manufacturing issues	
	1	.39		141
1	1 vaccines aimed to treat rather than prevent, to		1 are more challenging than for a small drug. The use	141
1 2			 are more challenging than for a small drug. The use of retroviruses or lentiviruses, gene carriers, those 	141
1 2 3	vaccines aimed to treat rather than prevent, to			141
2	vaccines aimed to treat rather than prevent, to stimulate the patient's immune system to recognize and		2 of retroviruses or lentiviruses, gene carriers, those	141
2 3	vaccines aimed to treat rather than prevent, to stimulate the patient's immune system to recognize and eliminate HIV.		2 of retroviruses or lentiviruses, gene carriers, those3 are the buses that carry the gene of interest that you	141
2 3 4	vaccines aimed to treat rather than prevent, to stimulate the patient's immune system to recognize and eliminate HIV. So that's the realities that there are lots		2 of retroviruses or lentiviruses, gene carriers, those3 are the buses that carry the gene of interest that you4 want to insert in humans, they allow for prolonged	141
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1	discontinue the product when adverse events occur.		1	And, finally, what else do you want FDA to know about	
2	And they have also concerns about late onset risks			HIV cure research?	
3	such as cancer, malignancy.		3	So this is my contact information. I just	
4	And I'm going to talk also about the		4	want to emphasize that in the last point here is that	
5	combination of strategies. People in academia and		5	Learn webinar series from our office, Office of	
6	industry recognize that it's likely that if there is a		6	Cellular, Tissue and Gene Therapies, which is	
7	chance of success for curing HIV, it will come from a		7	available in the FDA external website and provides a	
8	combination of multiple different approaches. And to		8	little bit of our thinking about general product	
9	attack the different mechanisms of HIV persistence,		9	development and issues in pediatric research or some	
10	for example, the low level replication or the		10	of the challenges we face in clinical trials with our	
11	reservoirs of HIV, it recognize that combinations with		11	products. And this is also some of the websites of	
12	these different approaches may be needed. But there		12	public access to the Center for Biologics and	
13	are some scientific issues that are associated with		-	Evaluation Research.	
14	this approach of combination therapies particularly		14	Thank you very much.	
15	when we include investigational therapies in the		15	DR. IRONY: With that, Dr. Goldkind. Informed Consent Issues in HIV Cure Research	
16	combination. So if it's two approved products and we			DR. GOLDKIND: Good afternoon. So I am Dr.	
17 18	are combining them, it's a little less challenging because we know a lot about those products, but when		17 18	Sara Goldkind. I am the senior bioethicist here at	
19	it's one product is new or new in humans and		10 19	the FDA, and I would like to talk to you today about	
20	investigation, it creates some challenges in looking			issues related to informed consent and provide some	
20	at the combination therapy. One of them is how much		20	background for our future discussions because we would	
22	information we need about the safety and the			really like to get your input on a number of different	
		143			145
1	effectiveness of each of components alone in the	143	1	issues that are impactful on being able to accomplish	145
1 2	effectiveness of each of components alone in the course of this development. And the recognition that	143	2	an informed consent process in a way that's most	145
1 2 3	effectiveness of each of components alone in the course of this development. And the recognition that if combination therapy is needed, each component alone	143	2 3	an informed consent process in a way that's most useful to patients who would be enrolled in clinical	145
1 2 3 4	effectiveness of each of components alone in the course of this development. And the recognition that if combination therapy is needed, each component alone may not work to cure HIV, so patients may be at risk	143	2 3	an informed consent process in a way that's most useful to patients who would be enrolled in clinical trials, which I'll call "participants" in this	145
4 5	effectiveness of each of components alone in the course of this development. And the recognition that if combination therapy is needed, each component alone may not work to cure HIV, so patients may be at risk of this drug, but they are unlikely to benefit from	143	2 3 4 5	an informed consent process in a way that's most useful to patients who would be enrolled in clinical trials, which I'll call "participants" in this presentation.	145
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4 5 6 7	effectiveness of each of components alone in the course of this development. And the recognition that if combination therapy is needed, each component alone may not work to cure HIV, so patients may be at risk of this drug, but they are unlikely to benefit from research from each component alone, so that raises some informed consent issues, and Dr. Goldkind is	143	2 3 4 5 6 7	an informed consent process in a way that's most useful to patients who would be enrolled in clinical trials, which I'll call "participants" in this presentation. And before I get started on my presentation, just by a show of hands, I would like to see how many	145
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 particular issue called therapeutic misconception, which I'll define for you during my talk, and then finally outline a number of the questions that we would like to have your input on during our discussion session. So first of all, what is an informed consent process? Ideally, what it should be is an ongoing educational process between the investigator or another qualified individual that the investigator appoints, and the potential or the current participant in the trial. And a summary of the process and what it should really accomplish is that there would be adequate disclosure of information to allow for an informed decision about participation in the research. There should be adequate comprehension of the information that's presented and adequate opportunity to consider whether or not to participate, it shouldn't be done in such a hurried manner that you really don't feel like you had ample time to consider the clinical trial and its ramifications, to talk to trusted family or friends, and then, finally, a voluntary agreement to participate. 		 1 ethically be accomplished, and we have actually 2 incorporated those recommendations into FDA's 3 regulations. And I am going to present to you three 4 of them today for our discussion, the three that we 5 feel are the most challenging in relation to HIV cure 6 research, but certainly our discussion can go beyond 7 these if you feel that you want to raise other issues. 8 And the first one is the description of any 9 reasonably foreseeable risks or discomforts to the 10 participant; a description of any benefits to the 11 participant, either direct benefit or to others who 12 may reasonably be expected to benefit from the 13 research; and then a disclosure of appropriate 14 alternative procedures or courses of treatment, if 15 any, that might be advantageous to the participant. 16 So, in other words, if you're not in the clinical 17 trial, what would you be getting as a form of 18 treatment or what would be happening with you? 19 So I want to drill down. In the next few 20 slides, what I want to do is take each of those three 21 elements that I just pointed out and look at them a 22 little bit more in detail. And the first, the
22 voluntary agreement to participate.		22 intre bit more in detail. And the first, the
1 But the informed consent process doesn't end	147	1 description of reasonably foreseeable risks or
2 there, it's more than just signing the informed	147	 description of reasonably foreseeable risks or discomforts FDA advises should describe the risks or
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1	should be clear, balanced, and not overly optimistic		alternatives are to their entering research, if any,	
2	or overstated. We don't want to encourage people to			
3				
4	trial, we want it to be a very balanced approach to	4		
5	the description of risk in the informed consent	4		
6	document.			
7	And, again, it should describe the benefits			
8	not only to the participants in the research, but to	8		
9	others, if there are any. And if there aren't any		in two clinical trials simultaneously.	
10		10	-	
11	clearly as well.	11		
12	And here I want to pause and describe what	12		
13	the therapeutic misconception is. This was a term	13		
14	that was adopted, proposed, in the early 1980s, and it	14		
15	was proposed by Dr. Paul Appelbaum and others, Dr.	15		
16		16		
17		17		
18	research, and they were thinking that clinical	18		
19	research was really being designed to provide medical	19		
20	care.	20		
21	And in some circumstances, that certainly	2	-	
22		22		
	15	51		153
1	15 between clinical research and clinical care, and that		in animals, we don't know always what the risks are	153
	between clinical research and clinical care, and that	1	in animals, we don't know always what the risks are for human beings, so we want to understand how that	153
	between clinical research and clinical care, and that	1	for human beings, so we want to understand how that	153
2	between clinical research and clinical care, and that is that clinical research is ultimately designed to	1	for human beings, so we want to understand how that can be best communicated to potential subjects,	153
2 3	between clinical research and clinical care, and that is that clinical research is ultimately designed to answer a series of specific scientific questions or to	1	for human beings, so we want to understand how thatcan be best communicated to potential subjects,potential participants. And then, finally, is there	153
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		154			156
1 2	colleagues at the table to reintroduce themselves because there are some new faces up here and we also		1 2	they're prohibitively expensive and out of reach for most, and that this issue is still huge in terms of	
3	have some new faces out there, so it would be helpful		3	stigma, self-esteem, depression, and isolation. So I	
4	if we could just go down the line.		4	think that's something new that we didn't touch on	
5	You already introduced yourself, so maybe		5	-	
6	DR. DEMING: Damon Deming. I'm a virologist		6	And then just two other comments about	
7	with the Division of Antiviral Products.		7	developing long-acting injectable treatments and	
8	DR. MURRAY: Jeff Murray, Deputy for		8	monthly visits that would be required. So this person	
9	Antiviral Products.		9	was interested, maybe we can work this into the	
10	DR. STRUBLE: Kim Struble, Medical Team		10	discussion or if patients have comments on this, they	
11	Leader, Antiviral Products.		11	could submit it to the docket, but this person was	
12	DR. BIRNKRANT: Debbie Birnkrant, Division		12	wondering how best they could support patients for	
13	Director, Antiviral Products.		13	monthly injections and if patients would be willing to	
14	DR. WITTEN: Celia Witten, Office Director		14	receive monthly injections versus daily pills and the	
15	of the Office of Cell, Tissue and Gene Therapies at		15	impact on their lives.	
16	the Center for Biologics at FDA.		16	And then, finally, we had a general comment	
17	DR. IRONY: Ilan Irony. I'm the Branch		17	about the context of this meeting and its relevance,	
18	Chief of the General Medicine Branch in the Office of		18	and this commenter said that it's important to	
19	Cellular, Tissue, and Gene Therapies at CBER.		19	understand the importance of these issues in a global	
20	DR. SHERWAT: Adam Sherwat, Medical Officer,		20	context and not just the U.S. And this person	
21	Antiviral Products.		21	provided more details about the conclusions about	
22	DR. COX: Ed Cox, Director of the Office of		22	today's meeting will have wide influence	
		155			157
1	Antimicrobial Products within CDER, FDA.	155	1	internationally, that this is a start, but it's	157
1 2	Antimicrobial Products within CDER, FDA. DR. EGGERS: And while Andrea is summarizing	155		internationally, that this is a start, but it's important to also reach out to others.	157
1 2 3	DR. EGGERS: And while Andrea is summarizing	155		important to also reach out to others.	157
	DR. EGGERS: And while Andrea is summarizing these, if I can ask the panel members for this	155	2 3		157
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3 4	DR. EGGERS: And while Andrea is summarizing these, if I can ask the panel members for this afternoon to come up. And we are getting one more	155	2 3 4	important to also reach out to others. DR. EGGERS: Thank you, Andrea. Overview of Discussion Format DR. EGGERS: Well, I'm not going to spend	157
3 4 5	DR. EGGERS: And while Andrea is summarizing these, if I can ask the panel members for this afternoon to come up. And we are getting one more chair for you because I guess I don't count very well.	155	2 3 4 5	important to also reach out to others. DR. EGGERS: Thank you, Andrea. Overview of Discussion Format DR. EGGERS: Well, I'm not going to spend	157
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- 21 wasting, and he provided some more details about that,
- 22 about the treatments using facial fillers and that
- 22 set a good foundation for our discussion to give us

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	something that we can react to and discuss further. And then we will be moving out into the audience and opening it up like we did this morning, which is much more of a free discussion. So we're going to try our experiment again. Periodically we will invite in-person and web participants to respond to some specific questions. Again, this is just a discussion aid, it just helps us understand the perspectives in the room and see how many participants share a particular perspective without needing a raise of hands or anything in the room. In person, we use the response clickers, and if you haven't gotten a response clicker and you are identified as a patient or patient representative, could you please raise your hand?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	agencies, et cetera. And as I said this morning, we hope that you find this as useful as my colleagues up here, but for today, you are in a listening mode and asking not to contribute to the discussion. There is an open public comment, and we will take until the next break, if you want to make a comment in the open public comment, please see the registration desk. Our discussion today will focus on understanding the common ground on important issues, and we fully recognize that there are a number of important issues regarding HIV care and the support of patients, people who live with HIV. We will be trying to stay to the questions that we are trying to discuss today, the participation in cure research and the informed consent and how to clearly communicate about that. Again, there is a public comment if there is	
17	(Show of hands.)	17	something else that you want to comment on.	
18	DR. EGGERS: All right, so Andrea will take	18	And if you haven't gotten a feedback form,	
19 20	care of that. And the web participants can respond through	19 20	we encourage you to grab an evaluation form and provide your feedback. This is completely voluntary,	
21	the poll through the webcast, and we got feedback that	21	but we appreciate the feedback we get on how to make	
22	we went really quickly through those, so we will try	22	these meetings in the future as effective for	
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	159			161
	to give you some more time. And regarding the	1	everyone, for us, for the patient communities, and for	161
2	to give you some more time. And regarding the webcast, if you're just joining us on the webcast for	1 2 3	other stakeholders.	161
2 3	to give you some more time. And regarding the webcast, if you're just joining us on the webcast for this afternoon, we have about 180 to 200 people on the	1 2 3 4	other stakeholders. So thank you.	161
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-	the National Alliance of State and Territorial AIDS Directors, or NASTAD. We are a membership organization that represents state health departments and their staff in HIV/AIDS programming as well as viral hepatitis programs all the way from prevention through access to care and treatment primarily through the AIDS drug assistance programs. I'm a person living with HIV and AIDS since 1986, and I have been in this field since '96, but it's only recently that I've become much more involved in sort of the advocacy community. Up until that point, I was doing a lot of on-the-ground work at a local health department. MR. TAYLOR: My name is Jeff Taylor, and I have been living with HIV for over 30 years. I first got involved in the first AZT trials back in the '80s and have been involved in clinical research ever since. I was on the AIDS Clinical Trials Group, Community Constituency Group, and currently I work with a group called the AIDS Treatment Activists Coalition, serve on the newly formed CARE Collaboratory Community Advisory Board, and I'm on the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	groups that everybody has talked about, AIDS Treatment Activists Coalition, the Community Constituency Group of the ACTG, the CARE Collaboratory. I've worked with the FDA on a number of things, including their advisory panels, industry, advisory boards, you know, Hopkins Advisory Board for a very long time. You know, just invested. My organization was formed in 1986, '87 it was actually incorporated, and my husband died as a result of AIDS in 1987, and so many friends that probably as many people as are in this audience. So	
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	in San Francisco. And where I come at this is that back in 1989 some eventful things happened. First I came out, then I got a boyfriend, and he told me a week later that he was positive. Shortly thereafter, two of my closest friends died, and then by cousin came out as both gay and positive and had 30 T cells and pneumocystis pneumonia. And as a result of that, I joined ACT UP, which was a direct action group that still fortunately exists in some places, and shortly thereafter joined Project Inform's treatment hotline where we answered thousands of calls from all over the country for people who were desperate for information about treatment. And one thing I just want to say about that activist background and doing this so long is in one way or another we've been talking about a cure for a long time, but we didn't use the "C" word, we called	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	not only a patient perspective but in a timely way so that we can really have more of a chance to prepare for this than we did the first time around. So we're not knocking the doors now, we're working on this together. DR. EGGERS: Okay. Thank you very much. So let's ask those demographic questions that we asked this morning. The first one is an easy one. Do you live within the Washington, D.C. metropolitan area or outside of the Washington, D.C. metro area? If you can figure out the clickers, it's 1 or 2. (Answering question.) DR. EGGERS: Okay. Can we have the all right. We are 50-50 this morning, so it's nice to see	

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	here. Okay, let's go on to the next one. What is your age? Younger than 25, 25 to 34, 35 to 44, 45 to 54, 55 to 64, or 65 and better. (Answering question.) DR. EGGERS: Okay. Again we have a distinguished crowd here today, so it's great to see all this wisdom in the room. Okay. Can we go on to the next one? Are you male, female, transgender, or prefer not to answer? (Answering question.) DR. EGGERS: Okay. Just like this morning, we have about the same split. Okay. Was it 50-50 this morning? UNIDENTIFIED MALE SPEAKER: 60-40. DR. EGGERS: Okay. Thank you for correcting me. You guys keep me honest.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	For persons living with HIV, how many different types of antiretroviral treatment, ART, regimens have you taken? And please include your current ART regimen if you're on one in your count. You've never taken any ART regimens, you're currently on your first, you've taken two to three different regimens, more than three different regimens, or if you're not sure. (Answering question.) DR. EGGERS: Okay. Lots of experience, too, with different treatments and different regimens. Okay. Good. Thank you. This really helps us set sort of the understanding of who is in the room and what kind of perspectives we're getting today, so I thank you for answering those questions. We're going to have more questions throughout the afternoon, but enough of my talking. I'm going to ask the panel members to go down, and I might start with David. I understand that you have some data, some to share, so we'll start with David, and then we'll work and go throughout. Now, agendas are what they are, we're a	
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DR. EGGERS: Okay. Great. So two-thirds of patient and patient representatives here today who have answered the question. Can I ask Andrea, are the numbers available for the web? MS. FURIA-HELMS: Yes. About 70 percent answered no out of 20 responses. DR. EGGERS: Okay. Well, I would have to do math for that, but we've got representation on the web as well. So, again, we encourage those on the web to keep your comments coming in. Do we have one more? Yes. For persons living with HIV, how long ago was your diagnosis? Less than 2 years ago, 2 years ago to 10 years ago, 10 to 20 years ago, more than 20, I don't know, or prefer not to answer. (Answering question.) DR. EGGERS: Okay. Again a lot of wisdom in the room. Okay. And then I think there is one more	2 3 4 5 6 7	little bit behind the agenda, so if you could stick to your comments to 2 to 3 minutes, and then we'll go and you'll have plenty of time after that. So, David, thank you. MR. EVANS: Sure. So one of the reasons that I wanted to be here today is that a really fantastic activist named Nelson Vergel and I conducted a survey of people living with HIV about a year ago about cure research, and one of the things that I want to say about the survey is that we did so based on the belief that people really would want to show up for these trials even though they might not get any benefit out of them. And we fielded the survey between December of 2011 and early 2012. Within 6 weeks, we got 2,100 people to answer the survey, which for an online survey that we did for free and begged and borrowed and stole any kind of advertising that we could get, that's a pretty high response. The design of the survey was such that we made people have to answer every single question, so we got 100 percent completion on the survey response. You know, I don't have time to describe all	

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 1 the demographics. I can say that despite really 2 extensive outreach on our part to groups that are 3 serving women, people of color, and people who are 4 more recently diagnosed, our demographic looks a lot 5 like the people who are here today, and that it tended 6 to be a little bit more male, white, older, and having 7 lived with HIV for a very long time. 8 We also asked people before they answered 9 the questions to read a primer that I would call it 10 medium length. It wasn't short, but it wasn't really 11 long, and it described a lot of the risks of the kind 12 of cure research that we are engaged in right now or 13 soon will be. We couldn't be sure that people 14 actually read it, though, before they answered the 15 questions, so we can't say for certain how much they 16 really understood the risks when they answered 17 questions that we did. 18 But when we asked people to state how 19 motivated they were to participate in a study that 20 would benefit others but might carry risks for 21 themselves, 88 percent reported being at least 22 somewhat motivated, and 24 percent reported being very 	 about before is that when we looked at people who were very motivated to participate to benefit others, they were also very, very motivated to benefit themselves in a study, and so I think that if we're depending on people's altruism, we also have to be very careful not to in any way play on any misperceptions they may have that they are going to benefit from a study when they actually won't, so we'll talk more about that. DR. EGGERS: Thank you, David. Discussion 2: Patients' Perspectives on HIV Cure Research Panel #2 Comments on Question 1 - 4 DR. EGGERS: And then we'll start here with Matt and address the rest. And I didn't remind us, because the panel will come back later after a break later this afternoon, so right now we're just focusing on the participation in cure research, what you believe are the benefits, what would motivate you to participate or not in an HIV cure research study, what risks you would find acceptable and why, and in particular if you are asked to stop any HIV medications that you are currently taking, how that
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 1 motivated to participate. Granted, there is a 2 tremendous risk for what they call social desirability 3 bias of course, everybody wants to help somebody 4 else and so that could be affecting the results a 5 bit, but we still felt that was a pretty profound 6 response. 7 We also asked the question in a different 8 way, and received a very similar response. We asked 9 people what their willingness to participate in a 10 study would be if it definitely would not benefit them 11 but it might advance cure research in general, so a 12 little bit more diffuse, not will it help people, but 13 it will advance the scientific field, and there we 14 still had 81 percent reported being at least somewhat 15 motivated, and 16 percent reported being very willing 16 to motivate to participate. 17 But I think that there are other benefits to 18 participation in a study beyond altruism, and there 19 are things that I think we have to really be careful 20 and keep in mind, and we'll be talking about some of 21 those things. But one little piece of data that we 22 did when we did a deeper dive that I haven't talked 	 So, Matt. MR. SHARP: So I have some prepared statements if you don't mind. So I've been a participant in dozens of clinical trials over the years. I was actually first in every first-in-class trial of almost every antiretroviral drug class except for nucleoside analogs, and I survived, obviously, but unfortunately developed resistance due to sequential monotherapy. I was always most interested in host targeted approaches to HIV, but, as you all know, you all know what ended up taking precedence. So I needed other options to buy more time, as my immune system was not up to snuff, and I am in that older HIV population at risk for inflammatory-related comorbidities that we talked about this morning. I participated in invasive trials such as Dick Hong's thymus transplantation trial. I was in the first injectable Fuzeon TORO trials. I was in the first placebo-controlled human growth hormone trial. I was in the placebo arm at first of that trial. And most recently, I entered a Sangamo zinc finger

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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	nuclease gene therapy trial. So mostly I really had no choice to be in all of the studies, and despite my highly resistant virus, I've been undetectable for over 5 years now, and my T cells have doubled, remaining that way 2 years after the zinc finger trial. So I believe I'm really here as a result of being in clinical trials and aggressive approach to fighting HIV from the very beginning. But the motivation for entering these cure- related trials is different today than what it was in the early days of the epidemic, as you all know. People needed treatment to buy time to live and survive. We have to do better today. There is much room for improvement in the care and treatment of people with HIV. This is something that we may have already discovered through Sangamo's first gene therapy trials where a functional cure may not be likely but additional immune recovery certainly has	2 3 4 5 6 7 8 9 10 11	to participate in several clinical trials. And at the time, I was really looking at it from a very personal and a very selfish motivation because I wanted access to what I knew was very promising in terms of options for therapy. Obviously, we are in a very different	170
20	been shown in a few patients in the first cohort.	20	place now, and then I think that even at the time I	I
20	So there are a lot of people out there like	20	felt like there were probably a lot of risks that I	
	myself who want to take these risks and where there is		didn't know the answers to, but I was willing to take	
22	mysen who want to take these fisks and where there is		utun t know the answers to, but I was winning to take	
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2 3 4 5 6 7 8 9 10 11 12 13 14	no benefit because we want to live to see a cure, we want a cure ourselves, or we want at least a functional cure. And then, as David said, many people enroll for altruistic reasons. And at least I know in the gay community, it's known that people want to give back in the form of clinical research to help their own. When I go out and talk about a cure in the community, I always ask how many people would want to be involved in a cure- related trial and almost every hand goes up in the room. But there are risks. And I'm a very different patient; I've been willing to risk a lot to be in these clinical trials. In the thymus transplantation study, I risked an invasive surgery in transplant	2 3 4 5 6 7 8 9 10 11 12 13 14	not terribly surprising because I think a lot of people do believe that there is really a good thing to be had by participating in these, but that therapeutic misconception that we heard about earlier is something that I think is in the minds of patients that are considering getting into these things now. One of the things I would like to see if I were going into a clinical trial now was that there would be some kind of benefit for me and I would get maybe more monitoring than I would and more deeper	
	rejection drugs. In the gene therapy trial, I obviously took a lot of risks with the manipulation of my own CD4 cells. Everyone is individual, though, and the risks they take might be more or less than others. Everyone needs to weigh their own informed decisions against the risk and benefit obviously. And as the treatment guidelines state, everyone is individual. I feel that since there is going to be much	15 16 17 18 19 20 21 22	dive into what's functioning inside my body than I would get if I just go to my HIV doc. So I think that it's a very different environment now in terms of what we look at with giving informed consent and having participants in cure research. For myself, I would really want to know the benefits, the scientific benefits, and the risks that we believe are in place very clearly without having to	

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1 go through a 5-hour process with 9,000 different pages 1 got to that place and how it shaped my perceptions. 2 of something I didn't necessarily understand. 2 One of the early ACTG-PCP prophylaxis trials 3 was comparing Bactrim, Mepron, and aerosolized 3 From risks that I would find unacceptable, I 4 pentamidine to see which was most effective at 4 think I'm very used to sort of the nausea, the 5 fatigue, and the diarrhea. Of course, some of that 5 preventing PCP. And I started on Bactrim, got the 6 could be that I'm getting older, so you never which is 6 horrible rash, the same thing with Mepron, so I was 7 caused by what, but nonetheless, some of the more 7 finally put on aerosolized pentamidine, and as the 8 immediate risks are symptoms that you might experience study progressed, it was becoming more and more 8 or ones that I would be concerned about to try to 9 9 evident that that was not the optimal arm to be on. 10 minimize, whereas some of the longer term risks, I And my private physician came to me and said, "You 10 11 probably wouldn't be quite as concerned about, even 11 know, you're on all these different antibiotics for 12 though I know there could be a risk for cancer or all these things, I could desensitize you back to 12 13 others kinds of longer term events, blood clots, 13 Bactrim, I've done it with other patients, I'm sure I 14 seizures, et cetera. I think I would be less worried could do it with you, you take fewer pills, and it 14 15 about that than I would be about the day-to-day kind 15 would be better at preventing your PCP as well." 16 16 of interactions that medications have on me. And so I was presented with a real dilemma. 17 And then, lastly, I think being asked to 17 I went to the study nurses and I said, "My doctor has 18 give up my treatment regimen that I've worked very told me this," and they said, "You know, you're right, 18 19 hard to get something that works, number one, and, 19 this is an option for you, and we're not going to tell 20 two, doesn't interrupt my daily flow is a real barrier 20 you what to do, all we can tell you is that on our 21 in terms of participating in cure research. For 21 site nobody has broken through with aerosolized 22 myself, I'm not sure I would do it, giving that up and 22 pentamidine, they've done fine, you've got 6 more 179 181 1 having the risk of further complications as a result 1 months on the study, and the decision is yours." So 2 of not staying on medications. I've taught myself 2 being the altruistic individual that I was, I said, 3 over many, many years how to stay adherent, and to 3 what the heck, what's another 6 months after 2-plus 4 change that whole regimen up might be difficult for me 4 years of being in this trial? 5 5 to make that leap. Well, sure enough, with 2 T cells, I 6 I'll stop there. 6 developed PCP, both my lungs collapsed, and then I 7 DR. EGGERS: Thank you, Murray. 7 nearly died. But I pulled through and it was a 8 MR. TAYLOR: Well, like Matt and Murray, I 8 valuable lesson learned. And would I do it again? 9 started early on basically for the same reasons, to 9 Maybe not. I think I might have placed my own health 10 get access to drugs to stay alive. And I think it's 10 as a priority because I still have lasting lung damage 11 very different now, but back in those days, I mean, 11 as a result of that. 12 12 most of the trials were placebo-controlled -- you got More recently, I was in a vaccine trial that 13 the drug, you didn't -- and then they waited to see had a structured treatment interruption, and I did the 13 14 who lived or died, which is a kind of grim way of interruption. It was unfortunate enough to be during 14 15 measuring efficacy, and fortunately we moved beyond flu season and I got the flu the same week I stopped 15 16 that, but I think as we move into this arena, we're 16 my meds. So I think I really skewed their study going to be back in those situations where there is no 17 results. And when I had to go back on the regimen, I 17 18 benefit in the control arm, or even in the treatment 18 restarted my original regimen, and for some reason it 19 arm for that matter. 19 didn't work. We couldn't find any evidence of 20 20 And I would like to share an anecdote about resistance fortunately, but they had to throw more 21 a couple of trials I was in where I didn't receive pills on top to make me undetectable again. So I 21 22 benefit and actually had some harm and kind of how I 22 think again it's a personal example of where something

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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	doctors and staff, and figure out what's going to work for them, what their options are if it doesn't work, you know, examine all the scenarios one-by-one, and decide what's best for them. That's all I'm going to say. DR. EGGERS: Thank you very much. And, Lynda? MS. DEE: So, you know, I'm struck by something that on the CARE CAB, the doc, the PI of the study came to us and gave us a letter from somebody from the North Carolina area who was a heterosexual	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	CARE Collaboratory, I have helped them get study participants for their leukapheresis cell trial, and I was wondering because everybody that I thought of because you have to sit there for 3 hours was on disability and could really use that \$50 that they got, you know. So those are the kind of people that I got in touch with and a lot of them signed up. And I talked to a number of the other docs there, and they have found exactly what David's study has found, that there are a lot of people that are really interested in being in trials just for altruistic reasons, and most of those people are not on disability, you know, at least in that little Hopkins group. So I guess people have different reasons for participating. And what would be an acceptable risk? I just finished a clinical trial in HCV, and you get these pages and pages of stuff that say, well, this could happen, that could happen, and I really often wonder again if people really understand what some of this stuff means, they either want to do it or they don't, or that they pay attention to what's even included in the informed accent. But with HIV auro	
22	who I think he may have said that he had all these	22	included in the informed consent. But with HIV cure	
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2 3 4 5 6	religious issues, and I think felt very guilty that he was HIV-positive and that he might have infected his wife, and all of that sort of thing. So he was begging to be put on one of these clinical trials because of his situation. Now, here was a person that had no idea that these trials couldn't help him really, that he would really have no benefit. So I guess the point that I'm trying to make is that we really need to be sure that people know what they're getting into. I mean, not everybody has been through what the panelists have, you know, through years of the epidemic, so people hear "cure." You know, in the United States we're like, you know, little blurbs of cure, so, "Okay, well, where can I get some of that?" So we really have to be careful, and I think it's the community's role as much as the agency's role to make sure that people know what they're getting into, and we'll talk about that more in the informed consent stuff. And what would motivate you to participate? You know, being involved with the Hopkins CAB and the	2 3 4 5 6 7 8	trials, it's going to be so important that people understand that this could really affect where you are now. So it's I think important to look at people in different groups. Now, you know, a year ago I would have said, well, maybe if I was newly diagnosed, I might be a better candidate for this, there might not be as big a chance for me to get off my treatment or I wouldn't have a regimen like Murray described that has taken him years to get right, but now then you have this new data that says, well, you know, if you can get treated early enough and stay on for just enough amount of time, that you might be essentially able to go off treatment. So maybe that patient population is not the right patient population to start. I'm trying to think about this as how I would think about it. So maybe the patients in the middle are the best ones. I don't know. But somehow all of this information has to be communicated to people to be sure that they understand what the risk really is. You could get cancer. Well, what does that mean? When? How much? I mean, you see people that smoke,	

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188 1 still smoke, well, "Oh, I won't get cancer." You 1 down the road kinds of things I'm willing to take some 2 know, you've heard people say that, I'm sure. 2 risks on more so than I am my quality of life now. 3 So if we could somehow do a better job of 3 MR. EVANS: I can add to that a little bit 4 actually defining what risks we're talking about and 4 just based on the survey that we did. First of all, 5 if it's risk of a disease, if we could get a little 5 it was interesting that people who had been positive 6 bit more clear instead of this -- and I'm sure we'll 6 the least long who had the highest CD4 count were the 7 7 talk about this more when we get to informed consents, least likely to take part in these kinds of studies. 8 but a lot of those documents are really not anymore, I 8 The other thing we found that I thought was 9 think, not to protect patients, but they're to protect 9 interesting, though, that runs a little counter to 10 the IRBs and the institutions. So I think we need to what Murray said, was that people felt very positive 10 11 really, really drill down on what they should say, and 11 about their current antiretroviral therapy, and almost 12 I think we'll talk about that later, as I said. everybody was on it. Ninety-two percent said they 12 13 About stopping medications, I mean, that's 13 felt positive or very positive, so very few people 14 really a tough one. I mean, it's really hard to have didn't like their therapy. And 75 percent reported 14 15 somebody that has really been sick for so long and 15 only having mild or moderate side effects. And when 16 say, okay, you're all right now, but the way to prove we tried to analyze it and see how people felt about 16 17 this drug is for you to stop taking your medications 17 therapy affected their choice to participate in a 18 to see, or procedure, that it's really worked. So, I clinical trial, what we found is that it didn't, 18 mean, I think that it's going to be so important to be whether they felt great about their therapy or didn't 19 19 20 sure that people know what it is they're getting 20 like it, it didn't seem to matter. Granted, the 21 themselves into. 21 people who didn't like it, there was a smaller number 22 DR. EGGERS: Thank you, Lynda. 22 of people. 187 189 What was I going to say? Yeah, that's it. 1 Do any of my colleagues want to have a sort 1 2 of clarifying question? 2 DR. EGGERS: Anyone else from FDA? 3 Kim? Yeah. 3 Okay. I'm sorry, Matt. 4 4 DR. STRUBLE: I have a follow-up question MR. SHARP: Yeah, just quick another 5 anecdote. In San Francisco, Quest Laboratories is 5 for Murray. I guess I was kind of struck by your 6 comment because I thought the other way, that you 6 performing some of the gene therapy trials that you thought that unacceptable risk, the long-term toxicity may be aware of, and they performed my cohort, and in 7 7 8 like having cancer, wasn't immediate for you, it was 8 the protocol they came back and asked us if we would 9 more the day- to-day types of toxicities, and the 9 like -- after the initial infusion of the product, 10 known toxicities versus the theoretical toxicities. 10 asked us if we wanted to stop therapy, and there were 11 And I was wondering if others shared that same eight participants in that cohort, and only person 11 12 perspective or could elaborate more on what they found 12 said that they would, so that's just that example. 13 was the immediate versus long term, hypothetical 13 And then there is a second study, a follow-14 versus known, unacceptable risk for cure research. 14 up study, that Sangamo is doing that they are actually 15 MR. PENNER: Well. I just want to make sure looking at a treatment interruption, and surprisingly, 15 16 that I'm clear. It's not that I wouldn't care about 16 Jay, Dr. Jay, is finding enough people to enter and enroll in that study. 17 that. I think that's far less in my mind than would 17 18 be what I have to deal with every day. You know, I 18 DR. EGGERS: Celia? 19 19 feel like we've all sort of experienced, "Oh, you DR. WITTEN: Yeah, we had some comments 20 could die." I mean, I was told when I was diagnosed 20 about stopping a treatment, about the treatment 21 that I had 6 months to live, and here it is nearly 30 interruption, and a comment to stop to see if the 21 22 years later fortunately, but I think it's sort of the 22 treatment really worked, but in a lot of cases, the

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192 1 me where I had a lot of diarrhea, where I had a lot of 1 treatment interruption would really be more to stop to 2 measure something, to see how well it's worked and not 2 nausea, and I had a lot of vomiting, and those were 3 really with the expectation that it's worked. So I'm 3 terrible days, and that's why I think I'm motivated to 4 wondering if that would change any of your comments. 4 say it the way I say it, that those things for me are 5 And other question I have is about risk and 5 really something that I don't want to repeat again, 6 the comments made, "Well, we would like to know better 6 whereas the longer term ones, yes, important, are less 7 what the risk is." But at least for our products what 7 in my mind as those initial symptoms might be. 8 we have is just a level of uncertainty regarding what 8 MS. DEE: You know, I may have said that 9 the risks really are because truly the animal models 9 badly about to see if it works per se, to see if what 10 are not good enough to even delineate them, and the you're measuring is really happening the way you would 10 11 kinds of things that Dr. Irony talked about, like the 11 like for it to be coming out, but, you know, I guess what I was trying to get at is that maybe there are 12 risk of cancer, what vectors to integrate, those are 12 13 risks, but those kinds of things can come up without 13 some populations for which that's less of a risk than 14 really being understood from the animal models. 14 others. 15 So I'm just wondering how the additional 15 And, you know, for some of this stuff, we 16 layer of uncertainty as it relates to risk would 16 don't know what the risk is going to be, and if you 17 factor into your answer to Number 3. So it's a 17 asked five people the same question, you might get question about your answer to Number 4 and Number 3. 18 five different answers about that. So when I was 18 19 19 MR. TAYLOR: Well, I think to piggyback on looking at these questions, I went around in circles a 20 the discussion, I'm unlike Murray in that I would be 20 number of times, and I thought, well, we're going to 21 willing to tough out some short-term discomfort and 21 be a lot of help, you'll have more questions than 22 inconvenience if I thought it was going to benefit 22 answers by the time we get done. 191 193 1 science, but if I thought I might get cancer later, 1 But I think if you think about it really, if 2 that might give me more pause. So I think people are 2 you think about the way we have developed drugs 3 very different and you can't generalize in this, that 3 before, you know, try and look at the populations 4 it's going to be very different across the board, and 4 where you can do the least harm, try and make sure 5 you really can't make assumptions, but I think if you 5 that people know what it is you're talking about, try 6 ask enough people, you're going to find people to step 6 to define the risks as best you can, be sure that you 7 forward for whatever reasons as long as you ascertain delineate or that the person understands that there is 7 8 that they're genuine and they really understand the 8 no benefit here for you, you know, that sort of thing, 9 risks. 9 are the concrete things that I could think of that 10 MR. PENNER: Yeah, I think Lynda mentioned 10 were good take-home messages. 11 earlier that it is very individualized, and I would 11 DR. EGGERS: I'm going to interrupt this 12 certainly concur with that. And I think that your 12 because I want to make sure that we allow the folks in 13 question about potentially stopping for a period of 13 the audience to also participate and contribute and 14 time to determine the effectiveness and then have the 14 build on what we're hearing. And before we do that, particular options again, that might change my mind. just to set the context, we have a couple of questions 15 15 16 I think some of the comments that I have made have 16 for your clickers and for the folks on the web. This 17 been very broad and not specific to a situation. So I 17 just lets us understand the experience with clinical 18 think that's certainly an important part of this as 18 research. 19 well as the situation in which you're asked to do 19 So have you ever participated in any type of 20 things. 20 clinical study related to HIV? Yes, no, or I'm not 21 You know, for me, I went through a period of 21 sure. 22 22 time when I was determining regimens that worked for (Answering question.)

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3 1 4 5 6 2 7 8 6 9 6 10 1 11 12 13 1 14 2 15 1 16 2 17 18 19 1 20	DR. EGGERS: Okay. So the majority of you have participated in some form of clinical research related to HIV. Do we have the experiences on the web? MS. FURIA-HELMS: About 66 percent have not, 33 percent have. DR. EGGERS: Okay. Okay. And then another question is, have you ever participated in any type of clinical studies specifically related to HIV cure research? Yes, no, or you're not sure. (Answering question.) DR. EGGERS: Okay. So more experience with the clinical research just in general related to HIV and less with cure research, which is not surprising, but it does help us understand where the perspectives are in the room. Did we get the numbers for the web? MS. FURIA-HELMS: Yep. The majority have not, 93 percent. DR. EGGERS: Okay. Great. Thank you. Large-Group Facilitated Discussion on Question 1 - 4 DR. EGGERS: So I know that my colleagues	1 2	that, and it's not just whether or not they're going to be feeling altruistic or not, it's all these other elements. So that's it. DR. EGGERS: Great. Thank you. Does anyone else have any first reactions that were surprising? Yes, Melanie. MS. REESE: Not surprising, based on the fact that a lot of these are long-term survivors in the beginning being infected in the beginning of the epidemic, and their desire to continue to live, to grab onto hope, that it would transform from just staying alive to eventually being able to help somebody get a cure and not have to live long term with having to take meds, I wasn't surprised about	
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2 1 3 5 4 6 5 7 6 5 7 2 8 9 4 10 i 11 6 12 1 13 1 14 1 15 i 16 1 17 1 18 19 1 20 7 21 6	have more questions to ask, but what I want to ask first is if anyone here in the audience found anything said by the panel members really surprising, like it doesn't necessarily relate with your experience or you would have thought something different or just surprising in general. Oh, and if you could state your name before you speak. MR. GARNER: Hi. My name is Alex Garner. And I guess I was more surprised by what wasn't said in the sense that as we had those demographic questions earlier before the discussion, I was struck by who wasn't represented and who isn't here and who historically isn't represented in studies. And as we talk about the sort of vast experience that all of us in this room have, it's troubling to think of the future of the epidemic which looks like it's black and brown young gay men, and they're not here. So part of me wants to encourage all of us to sort of remember that because it's critical to the work that we're doing especially when communities of color have such a troubling history with federal agencies and studies and stuff like that. And when we	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 with all my other conditions, I would not be willing to risk getting off the medication that I have been on because I don't know if pulling the plug on that would cause something horrendous to happen to all my other conditions. So that's my perspective, although altruistically, idealistically I would be happy to be in a trial. But being a woman, there haven't been that many. However, I was able to be in one because I was on Depakote, and somewhere in Australia Depakote was shown to deplete the reservoir of the virus, you know, when you were suppressed, and so I was able to be in that one, but most of the other ones I was not. DR. EGGERS: Okay. So let's oh, go ahead. Was there another hand up? (No audible response.) DR. EGGERS: Let's just make sure that we have fully discussed the idea of the benefit. And we heard the altruism. Can I ask, David, did people have open-ended responses, the 80 percent who would participate, did they 	

	19	8		200
1	MR. EVANS: No. It was on a Likert scale,		1 let me just put it this way. When I talked to one of	
	so it was "Very willing," "Willing."		2 the doctors at Hopkins, I also asked about biopsies,	
3	DR. EGGERS: So does anyone want to follow		3 and does that dissuade people when he talks to them	
	up and build upon what we heard about any of the		4 about what's actually required in a trial? And he was	
	benefits or the perceived benefits of participating in		5 saying, well, no, you know, that they're required to	
	a trial, understanding that there is perception of		6 do anal biopsies in some of the prep trials, and	
	benefits and then there is actual, you know, real		7 people don't seem to mind, but that they really need	
	benefits, so if we could focus on what you believe are		8 to be compensated for what they're going through, and	
	the benefits of the trial. If anyone wants to comment		9 there is nothing wrong with that. I mean, I think	
	on that?		0 that people are putting themselves on the line and	
11 12	And the panel you can expand upon Matt.		1 some people need the money, some people don't, but it	
	MR. SHARP: So something I brought up this		2 ought to at least be offered to people if we're sure	
	morning was getting to the cure, there are going to be		3 they know what they're getting into and we're not	
	a lot of steps along the way that we discover, and one		4 using them in any sort of illegal way. But I think 5 that's a real important thing in the beginning of	
	of those might be improvement in immunology and		5 that's a real important thing in the beginning of	
	immunologic response. So that's one thing that could		6 this.	
	be a benefit.		7 DR. EGGERS: Anyone in the audience?	
18	DR. EGGERS: Any question from FDA to follow		8 Yes, go ahead. And if you could state your	
	up on that?		9 name, please.	
20	(No audible response.)		0 MR. FISHER: My name is Kevin Fisher. One	
21	DR. EGGERS: No? Okay.	2	1 5	
22	Any other benefits?	$ ^2$	2 where sort of altruism overlaps with benefit, is that	
	19	9		201
1	MR. EVANS: There are a couple things that		1 there was a study that was very similar to the study	
2	people might perceive as a benefit that we sometimes		2 that David referred to that was done in Holland with	
	don't like to think about, and one of the things that		3 HVM where they asked HIV-positive individuals what	
	I can tell you is that when I was a broke student		4 they thought about a cure and why they might be	
	living on part-time money, I participated in research		5 interested in a cure, and interesting, one of the	
	because it paid money. And another experience I've		6 things, as David said, a lot of people weren't	
	had as a clinical trial participant was going in even		7 necessarily concerned about their medications or	
	though I knew I didn't want the therapy, but it would		8 toxicities necessarily, but one of the biggest	
	give me access to diagnostic procedures that weren't		9 concerns was about the future, like what will things	
	standard medical care that I had read would be	1	0 happen in 20 years and basically how will my life end	
	beneficial to me. So just things that people think		1 and how will this disease affect me in ways that I	
	about.		2 don't quite understand? And one of the benefits of	
13	MS. DEE: You know, and a lot of the people		3 going to cure research was actually maybe to get a	
	that we have referred to Hopkins, a lot of them are		4 step towards that way.	
	African American MSM and a lot of them are on		5 So this would be a case where you might join	
	disability, and a lot of them were interested in the		6 a trial even though it wouldn't necessarily benefit	
	money that they got because they needed it. Now, I		7 you, but you would actually in some sense push forward	
	think we have to be really careful about the		8 the general knowledge this actually kind of goes to	
110	-		9 Matt's point push forward the general knowledge so	
	inducement there and whether we're getting beoble into		rent rent rent and Beneral mit allo allo bo	
19	inducement there and whether we're getting people into things that are harmful or that they don't know what		0 that maybe one day actually people will have an answer	
19 20	things that are harmful or that they don't know what	2	0 that maybe one day actually people will have an answer 1 to that and they can maybe diminish some of that	
19 20		2 2		

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14 15 16 17 18 19 20 21	MR. FISHER: Yes, a little bit. I mean, there is a general altruistic, but helping your future self in some sense, and so that's where altruism and personal benefit kind of overlap in a way. DR. EGGERS: Okay. MS. DEE: You know, I think some people think, too, and they did in the old days of the epidemic, that, "Well, I'm going to get my foot in the door because if I get in here, maybe I'll be considered for the next one and the next one, and I'll be in line for something that really will be beneficial two steps down the line." Now, a lot of times, it disqualifies you from being in the next step and people should be informed of that, you know, but I do think people think that way. DR. EGGERS: Okay. MR. PENNER: Yeah, I was going to reiterate	2 3 4 5 6 6 7 7 8 9 9 10 11 12 13 14 15	MR. SCRUGGS: Good evening. I was listening and looking at the panel, and I thank you all for doing what you all are doing so I could be here, but I was listening to Murray, and I had almost forgot the days of diarrhea and throwing up and headaches. And I'm somewhat appreciative of your honesty. You know what I mean? Because what happens today, medicine, scientists, come together and they say we're coming up with these clinical trials and we want this certain cohort of persons in the trial, and, Lydia (sic), you spoke to it. A lot of them don't even read all that information that's in there, and they don't even look at the long-term effects that might happen down the road. I know I was one that didn't, and I got in the trial for what David spoke about, for the money, at first, and then it dawned on me that I could get free health exams every 6 months, not for my HIV but for my	
22	get in, it's going to lead to the next place, it's	22	high blood pressure, whatever else might be going on.	
	20	3		205
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	participation in the study at least for me would keep me very motivated thinking that there were other options that would help me improve my own life moving forward. DR. EGGERS: Do my panel members have any follow up questions on the idea of motivation for participating or benefit? (No audible response.) DR. EGGERS: If not, let's continue the discussion on the risks and the uncertainty about	4 5 6 9 9 10 11 12 13 14 15 16 17 18 19 20 21	 quality of my life today to get in a clinical trial for the future of somebody else? No, I wouldn't, and the reason I say, no, I wouldn't, because the way the quality of my life is right now, can't no clinical trial help me to maintain not a high level of my quality of life but just a minimal level without me going back into throwing up, the aches, the pain, the sleepless nights, and that's just the physical aspects. I ain't talking about mentally thinking I'm on the island by myself. So, no, no. Clinical trials have to give me more of a guarantee that I can still have some remnants of a mental and spiritual quality of life. Physically, I'll be able to deal with that if my mind and spirit is in tact. So a lot of times and I'm looking at you all and I want to say when you have people in your life that support you, your life is more healthier and enriched. When I was single, my life wasn't enriched because I felt like every time I 	

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once you get over a hurdle of physical discomfort and you realize that you are over that hurdle, you are not willing to subject yourself to that hurdle anymore for any particular reason without you getting a guarantee. You want a guarantee. And if anybody is involved, and they have enough courage and integrity to self-impose, they will say that. I don't care how much money is involved, Lydia (sic), but your quality of life is more than money. DR. EGGERS: Thank you very much, Nathaniel. We have a follow-up question, or comment I mean? MR. SCHAICH: Not to that, but just to the risk versus the benefit? DR. EGGERS: Sure. Yes. MR. SCHAICH: My name is Fred Schaich. I'm with IFARA and ATAC. I am concerned. I don't discount in any way David and Nelson's attempt to really get a good chunk of information from the	1 1 1 1 1 1 1 1 1 1 1 1 2 2	 2 getting credit. You know, you get very simple 3 language, you understand what your risks are if you 4 get a credit card, and we worked really hard to do 5 that. I would suggest we do the same thing around 6 clinical trials so that people fully understand what 7 the risks are in very clear language. We're also sort 8 of assuming that they're at a particular level of 9 health literacy, which isn't always the case. 0 So I think those sorts of things help people 1 understand what the risks are better, and they're more 1 likely to trust the institution who is going to 3 potentially put them at risks and therefore more 4 likely to want to participate and engage in that way. 5 DR. EGGERS: Can I build on one thing that 4 you just said, which is trust in the institution? And 7 we haven't talked about that at all today. Would 8 anyone like to comment on that point? Does that 9 matter? 0 MR. PENNER: I'll take a stab at that as 1 I've been thinking after a couple of people have 	
community, and they did. The one thing that I do care	2	2 talked. One is that I think at least some of us up	
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put it out there, it is that, but I think when you're talking about the reality of a trial, you have to really understand that's what we're really going to be talking about next, I guess, the consideration of, what is actually in that trial? What are the risks? What are the perceived risks? What are the discussed or potential risks that person could really evaluate fairly and honestly in themselves? And then the fact that you have a family or a job that may be interfered with in this protocol, those are all those	1 1 1 1 1 1 1 1 1 1 1 1 2 2	 network and brilliant friends and really good doctors and a working relationship with the FDA and other agencies, et cetera, to the point where I think we probably do have a lot of trust, and I think that makes a big difference. Many underserved populations, people living with HIV and AIDS, and it's been referenced here, don't have access to that, and I think it would be a lot more difficult to really have an honest dialogue with those individuals and have them involved in this, and we need those people involved in this type of research, and so that's one of the schisms I think that's out there that needs to be addressed to develop some trust such that individuals do feel as though there is a good support system as well as really clear informed risks, benefits, et cetera, rather than just what's on a piece of paper that you sign. DR. EGGERS: Great. Thanks. Anyone else want to build on that? Yes. 	
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	basically say what Murray said in terms of like involvement in the process from the beginning, not just in the process after you have developed your informed consent, until you have your conversation. Like, I mean, I love all my comrades here from years, but here we don't represent the demographics of the epidemic, the experiences of all people with AIDS, so in the process, that would be a good way to start building that trust for the future, and more in cure research that is going to be even more complicated. DR. EGGERS: I think when we come back after the break I think we should spend quite a bit of time following up on how to engage the folks that aren't like those here in the room, so we can follow up on that. I want to ask my colleagues, though, before we there are two more polling questions, so we're going to get to those before the break, but before we do, are there any follow-up questions that you want to ask? Sara, yes. DR. GOLDKIND: I have a follow-up question,	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	And the second thing that I've been hearing is that people don't read these very long, complicated informed consent documents, and so how can we communicate the information that's really salient in the informed consent documents to participants in a way that they will understand the information? DR. EGGERS: I have a feeling we won't we're going to be taking a break in a few minutes, and that's a huge discussion, so if we don't get to it now, we'll revisit that. But maybe one thing that I think could be	
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	but it might be something that we may have to revisit	1	anyone else like to comment on that?	213
2	but it might be something that we may have to revisit after the break. I've been hearing a lot of repeated	1 2 3	Melanie?	213
2 3	but it might be something that we may have to revisit after the break. I've been hearing a lot of repeated comments, it's become a theme. There are two themes	3	Melanie? MS. REESE: Yes. My name is Melanie Reese.	213
2 3 4	but it might be something that we may have to revisit after the break. I've been hearing a lot of repeated comments, it's become a theme. There are two themes that I wanted to flush out a little bit more. One is	3 4	Melanie? MS. REESE: Yes. My name is Melanie Reese. I get my treatment at Johns Hopkins University, and	213
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	services, that when I think about the rest of the population that depend on that, and that probably they will go with primary care physicians that will have just 15, 10 minutes to see these people, where would we have that conversation? How we support the physician to bring up that conversation? I just bring that up. DR. EGGERS: Great points. Okay. I want to make sure we get to a couple polling questions, and then we'll have a 15-minute break because that's what my agenda is telling me. So we've had a very rich conversation, and these are just two summary points, questions, to get at the perspectives in the room. So if we could have the next question. Okay. Now, this is completely voluntary, and we're not going to hold you to these answers, but after hearing this discussion today, would you consider	1 1 1 1 1 1 1 1 1 1 1 1 2 2 2	 going to get hurt," "You're not going to get hurt," it's not all that clear, I think. DR. EGGERS: You make a very good point. Perhaps for this would be the more intensive kind of trials. Okay. So a lot of folks would still consider participating in a study, although there are some folks who would not consider. Okay. Andrea, do we happen to have on the web? MS. FURIA-HELMS: 50-50. DR. EGGERS: Okay. Okay. Good. So lots of good discussion. There is one other question that we want to put up, a similar question to the last one. Would you consider participating in a study; no, you would not consider participating in a study; or you would not consider participating in a study; or you would not consider participating in a study; or you're not sure. (Answering question.) DR. EGGERS: And I understand that these two questions are really tied together, you know, it's 	
2	unlikely that you would gain any direct health benefit from participating? Yes, you would consider; no, you	215	 very related to the last question. Okay. Okay. Maybe it's not so related to the last 	217
2 3 4 5	unlikely that you would gain any direct health benefit from participating? Yes, you would consider; no, you would not consider participating in a study; or you're not sure. (Answering question.)	215	 Maybe it's not so related to the last question. This might be surprising to some of my colleagues. Thank you for your input. And on the web, so for those of you on the web, we had over half 	217
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2 i 3 l 4 5 g 6 t 7 u 8 s 9 r 10 a 11 a 12 l 13 c 14 a 15 i 16 a 17 t 18 a 19 20 21 s	going to be a lot of concern on is, "If I do the HDAC inhibitor, will I be excluded from the PD-1?" and, "If I do disulfiram trial, will I be excluded from this?" In other words, there needs to be a really good reason if you're going to exclude under those types of things, if you know what I'm saying. And I understand that early, small pilot proof-of-concept studies need to be really clean, you don't want to muddy it with anything, but I think in the more advanced trials, you really have to justify very well any reason you're excluding people. DR. EGGERS: Okay. Good. Okay. So why don't we take a break. We can revisit these topics again. We will focus first on the informed consent assues, but that's related to what we've been talking about all afternoon. So we'll take 15 minutes, and that means 3:45. Am I correct on that? We'll be back at 3:45. Thanks. (Whereupon, a brief recess was taken.) DR. EGGERS: As we take our seats, I will say that I spent such a fascinating conversation before the break, and we look forward to carry that on	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	really about, how should informed consent clearly communicate the purpose of a study, especially when it's not directly you know, it's in the early stages perhaps? How the informed consent should clearly communicate the potential benefits, and we talked about what we perceive those benefits to be, and how should it communicate the potential risks? And that includes the uncertainty about the risks, so in the cases where it's really unclear, it's uncertain, what those risks are. And other information that you would find helpful when deciding whether to enter an HIV cure research study. And for those of you who have participated in a study, perhaps what we could do is focus on things, information, that you haven't yet seen in your experiences, what kind of new information would you get if you're already familiar with those consent procedures? And I think we also want to ask a question - - and so maybe the panelists, if you have some thoughts as we go through, as we make our opening remarks about how we reach people and make sure	
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2 x 3 H 4 s 5 c 6 i 7 y 8 c 9 x 10 f 11 a 12 x 13 f 14 H 15 16 17 - 18 s 19 a 20 c	how for the remainder of our discussion. What I do want to say is on the web, it's been very clear we have a group of perspectives here in person that are shared, and those might not be shared by folks who are on the web, so I will encourage the folks on the web, if you have a brief comment about something that you've heard today or something that you think you experience or your perspective is much different than what you've heard expressed here by the folks in the room, then I encourage you to submit those comments and we will do our best to review those, and even if we don't review them, we will have them and we will read that and it will be included as part of the public record as well. Okay? Panel #2 Comments on Questions 5 - 6 DR. EGGERS: So now we're going to turn to - we have alluded to this and we've touched upon it some, but we want to now talk about informed consent, and I have a feeling that the questions and the discussion is going to be broader than just the questions that are up on the screen. So the questions that we do have up are	2 3 4 5 6 7 8 9 10 11 12	that the communications are reaching the range of folks who may be considering participating in a research trial, even if those perspectives may not be fully reflected here today. So you can comment on that. And then I think Dr. Goldkind will probably also have some other follow-up questions to ask. She has been instrumental in helping us shape this portion of the day. So with that, I'm done talking. We'll have the same format. We're probably, of course, a little bit behind schedule, but that's okay, we're going to have a full discussion, and we'll get you out of here on time. So I think maybe we'll start down the row and we'll start with Matt to address these questions, and we'll open it up for the full discussion. MR. SHARP: Thank you. So I guess I want to start out by saying that we've been talking about informed consent and the informed consent process for so long and we've been trying to explain it and trying to make it easier involvement with the people that we train and teach and talk to, and so I don't think	

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 that's none of that's changed, it's the same issues. What's changed is the science and the technology, so those are differences there that we need to remember. This is not a new thing, we've been doing this a long time. And one of the main things that I think is so important in informed consent is the word "process" and is the word "counseling." Why can't we make this a counseling effort that really goes in depth with these protocols? And I know there are issues with time and who is going to do it, but all of those things could be worked out later. But I love the idea of especially with the new technology that exists out there. I know there are new startup companies using tablet technology for informed consents, other ways of implementing informed consent rather than just a paper document that often the words are too big and nobody wants to read. I mean, I honestly, after you get a fifth revision of a protocol, often I don't even read it. So there is a lot of new technology. More time needs to be taken. And I was going to say, oh, testing, testing 	 the purpose is. And then also talking about the potential benefits as well as the potential risks. You know, I think as much as possible to quantify things in terms of this is very likely or it's unknown completely, we have no idea, or there is a slight likelihood, or in rare instances, if it can be as descriptive as possible about what is known based on previous trials or previous studies that have been done, I think the better. But I guess the last thing related to it is that we can't underestimate the power of working in the community through this process. And you asked the question at the very end, how do we get this outward? And I think we're not the representative folks, we're not the ones that need to be a part of any kind of these studies. I mean, we may need to be as well, but we really need to be thinking much broader, and that's a challenge, and I don't think any of us have the answer to how we outreach into the community because if we did, we wouldn't have 20 percent of our HIV infected population in this country that don't even know their status. So there are some real challenges 	
 the individual after an informed consent is performed, and just a simple test to see if they really understood what they were reading. Those are my ideas. DR. EGGERS: Thanks, Matt. MR. PENNER: So I have been thinking a lot about this, and I even have mentioned some of this, so I won't go into a lot of detail here, but I think informed consent is a very it's a large process, and it's more than just a form that you sign, and I think we really need to be thinking that that's really sort of the last thing that probably happens, that there should be a lot of other discussion. I think mformed consent about a counselor or even if it's your provider, you know, I can't imagine any of our providers sitting down with us and going over an informed consent about all the risks and benefits about a potential trial for 30 minutes or 45 minutes. What provider is going to have the time to do that and take the time to do that? But the more resources that can be provided as part of that informed consent process, I think would help clearly communicate what 	 with that, but it's a critical piece that we need to be focusing on as well. DR. EGGERS: Thank you, Murray. MR. TAYLOR: Yeah, I think Murray hit it on the head when he talked about outreach to community because we're fooling ourselves if we think that any document or any process, no matter how involved, is going to fully provide informed consent for something this complicated. The reason you can provide informed consent for the standard, you know, what's the next 3- in-1 combo pill is because people understand the process, the science, they know what they're getting into because they're familiar with it. This is completely unchartered territory for the patients and often for the researchers. So I think we need to step back and look at the much bigger picture and realize we need to start educating the entire community. I think all stakeholders, regulatory, the Delaney Collaboratories, pharma, need to collaborate with community leaders to go out and educate the community about the research as it's happening so we're bringing people up to speed in 	225

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 real time because this is going to be a lengthy process of years if we're really going to let people know what's going on and what they're getting into. And so I think this could include the development of robust community advisory boards and the Delaney Collaboratories and the communities where the first studies will be taking place, public forums by those CABs, the Collaboratories, to educate their communities, well written, and the emphasis on well written and not sensationalized or hyped stories in the press about what's happening and what it means, webinars, and especially and I think Alex referred to this earlier targeting the education of the underserved communities, such as the African American community and women, in conjunction with groups like the Black AIDS Institute, that have done really good work in educating the communities and bringing up community leaders to ensure that study participation is open and understood by those communities to avoid the usual skewed demographics that we've been talking about today. 		 consent process, we can actually test the process before we test the people who are consented. You can have a provider go out to a local community-based organization, you can pay participants 20 bucks, 25 bucks to show up, you can have them do their spiel, you can do a sample consent form, and then you can test the participants to see how understandable it is before you ever field the process. And, you know, businesses do this kind of stuff all the time, so I think we can learn from them. I think also video technology has gotten so much cheaper, and I think that sometimes people really learn better from watching a video, particularly when we're describing complex processes that are very difficult to imagine if you don't understand the underlying biology. I think something else that's important to do that's a little bit different than I see sometimes in the consent forms that I'm asked to review is that when you're describing the potential benefit of some of these very early studies and you're talking about the research goal so, for instance, I'll give a 	
 1 think we need to start now so we can ensure that the 2 community is well educated and able to provide the 3 consent so that when we do sit down with them, with a 4 possibly long piece of paper and a counselor and a 5 follow-up test, that they're going to have the 6 background to actually comprehend it and provide that 7 informed consent. 8 DR. EGGERS: Thank you, Jeff. 9 MR. EVANS: Yeah, I agree with everything 10 that's been said so far, but first I think it's 11 important to keep in mind that investigators have a 12 rather perverse incentive when it comes to informed 13 consent. You know, they are driven by cost and by 14 resources and by time, and I know for a fact that 15 there have been complaints in at least one of the 16 research networks by the investigators for having to 17 do testing of informed consents because it takes so 18 much time and it takes so much personnel, and that's a 19 short simple that they do. So I think, you know so 20 that's important to keep in mind. 21 That said, I think that there are some 22 things that we can do. I think in devising the 	227	 27 22 1 very specific example, when you're talking about HDAC 2 inhibitors, and they might describe that an HDAC 3 inhibitor we hope will wake up latent virus, therefore 4 perhaps making it more susceptible to the body for 5 destruction. 6 Now, that's the research goal that's 7 described, but I think what often doesn't end up 8 happening is the little bit further information that 9 perhaps we think people are too dumb to understand, 10 and that's to explain the fact that we don't even know 11 how much you have to wake up the virus. So there is 12 the sort of additional information that I hope we 13 don't oversimplify because I think that's really 14 important for people to know. 15 That's it. 16 DR. EGGERS: Thank you, David. 17 Lynda? 18 MS. DEE: So everybody has been great and 19 said a lot of good things. You know, informed consent 20 is like a legal term of art, and I think it has left 21 the patients behind, you know. I think that when you 22 look at an informed consent form, it's this long, and 	.9

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	it has nothing to do with protecting the patients anymore. I mean, I really believe that. I think it's about making sure that people don't get sued and that the IRBs are protected and that the institution is also protected, and the patients have gotten lost in this, I think. I think investigators are too busy. When is the last time I don't know of an investigator except some individual docs, but from an institution that sits down and talks to the patient and goes through the form. I mean, you're lucky if their phone number is on it, you know. That page is usually empty, you know. Anyway. But, I mean, I really think it behooves us to get people educated and to learn about what things are happening and what things mean, and I think that, you know, how can you clearly communicate let's see, the purpose of the study. Oh, there's one, benefit. How can you I'm sorry communicate potential benefit? Well, it should be the other way around. How can you be sure to communicate that there is no benefit there and that people get that? And we can educate everybody in the	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	know that they get it. I mean, you know, I think the video technology that David talked about is really helpful. I think it's really helpful, too, to videotape the nurse to make sure she's asking the right questions of people. You know, I don't know how that would be for privacy concerns if people want to be on tape, you know, but, I mean, I think that really nobody is better to get this stuff done than the great research nurses that are out there that are used to taking time with patients that are ones that make sure that you come in and that you stay enrolled and that you're doing what you're supposed to. I mean, they're like - - you know, women run the world, right? Most of them are women. A lot of them are men, but, I mean, I think that that's a joke, I'm just joking here with	
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2 3 4 5 6 7 8 9	world, but then there will be somebody that comes in that hasn't been to one of our things do you know what I mean? that isn't aware of any of this stuff. So you've got an investigator who really wants to get the study enrolled and get those bodies in there so he can get his study finished, and you've got some that have even more wrong motives than that, I guess. So what is it that we do? It's funny, I just finished a trial at Hopkins, and I was interested to hear what my friend in the audience said about what her experience was. Now, I don't know, just because	9	But, you know, I mean, I think somebody has got to take time with people individually to make sure that they get it, you know. DR. EGGERS: Thank you very much. Large- Group Facilitated Discussion on Questions 5-6 DR. EGGERS: I want to pick up before I ask my colleagues to see if they have any questions, and I think instead of doing that, I think we'll open it up for the whole discussion so that everyone can do that. But I was struck, David, you presented a really concrete thing about was it the length did	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DR. EGGERS: But is there a specific concept that you think should be communicated in the informed consent about cure research or about what we've been talking, about the science or about the risk or how to communicate the uncertainty, et cetera? MS. DEE: You know, I really think and I was trying to read it when I was speaking before, but I really want to reiterate that you should say that	1 1 1 1 1 1 1 1 1 1 1 1 1 2 2	 listservs or anything, all these stories break and people are talking about stopping taking their meds, and it's like this is crazy. So I agree with you, Debra, that perhaps we need to look at some other nomenclature in terms of because I think, although those of us who work in the field and live with the disease certainly hope for a cure, we know that realistically it's probably sometime away, and I get discouraged every time somebody uses the "C" word, as David used earlier,
		235	237
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16			2 what we're talking about here. There doesn't 3 necessarily need to be this treatment endpoint. So I

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1	been even hard for the scientists to come up with a	1	shouldn't underestimate the amount of optimism that	
2	good word.	2	talking about the cure has provided the community,	
3	DR. EGGERS: Murray?	3	both the research community and then the people living	
4	MR. PENNER: I do agree that if I hear the	4	with HIV. It's really too late to turn back the clock	
5	word "cure," and I'm in the community and potential	5	on that, I think that's unrealistic.	
6	for me to go into a trial that is cure related,	6	And I'm not really concerned about the	
7		7	individual trials because none of these trials are	
8		8	going to be called, "This is a cure trial," it's going	
9	hoping that there is a cure at the end of that for me,	9	to be, you know, eradication or latency or waking up	
10		10	the immune system, and it's not going to be described	
11	important consideration and/or the way that's	11	in those terms. So I don't really think there is a	
12		12	danger in that, and I think as long as the individual	
13	DR. EGGERS: And, David, I'm also going to	13	sites, when they're advertising these trials, are	
14	5 5 5	14	being ethical and not advertising it as cure research	
15	maybe provide some of that perspective as well.	15	but saying we're doing a trial about the immune system	
16	MR. EVANS: Sure. So the first thing I want	16	or something like that, it's going to be fine, so I	
17	5 5 1	17	don't think we need to tie ourselves in knots about	
	sign of where we are socially in the epidemic, that	18	this.	
	the "C" word can even be used, but when I'm talking	19	DR. EGGERS: Okay. Go ahead.	
	about research and what I think is appropriate for	20	MR. DOROSH: I was just going to say I don't like the "cure" word at all.	
	research, I don't think it should be used at all. And	21		
22	if there is a term I don't think any term is	22	DR. EGGERS: Can you state your name?	
	239			241
1		1	MR. DOROSH: Michael Dorosh, Treatment	241
1 2	perfect because with some of the gene therapies, we	1	MR. DOROSH: Michael Dorosh, Treatment Education Network, Denver.	241
-	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they	1		241
2	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of	1 2	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed	241
2 3	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of the goals regardless of what we're doing, so I think	1 2 3	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed into the TSGs, and they always have the short names	241
2 3 4	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of the goals regardless of what we're doing, so I think that's a term that I think is safe to use, it's a	1 2 3 4	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed into the TSGs, and they always have the short names for everything, like in the old days, you know, TRAD	241
2 3 4 5 6 7	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of the goals regardless of what we're doing, so I think that's a term that I think is safe to use, it's a little obscure, but it's safer to use, I think.	1 2 3 4 5 6 7	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed into the TSGs, and they always have the short names for everything, like in the old days, you know, TRAD (ph) and OpMan and OPART (ph) and all that. So they	241
2 3 4 5 6	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of the goals regardless of what we're doing, so I think that's a term that I think is safe to use, it's a little obscure, but it's safer to use, I think. And in terms of the studies, you know, our	1 2 3 4 5 6 7 8	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed into the TSGs, and they always have the short names for everything, like in the old days, you know, TRAD (ph) and OpMan and OPART (ph) and all that. So they were coming up with a name for us, and the actual name	241
2 3 4 5 6 7 8 9	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of the goals regardless of what we're doing, so I think that's a term that I think is safe to use, it's a little obscure, but it's safer to use, I think. And in terms of the studies, you know, our partner Nelson and I are hoping to get funding to do a	1 2 3 4 5 6 7 8 9	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed into the TSGs, and they always have the short names for everything, like in the old days, you know, TRAD (ph) and OpMan and OPART (ph) and all that. So they were coming up with a name for us, and the actual name of that, Cure TSG, it's not a Cure TSG, it's HIV	241
2 3 4 5 6 7 8 9 10	perfect because with some of the gene therapies, we may not reach eradication of the reservoir, but they may still very well control the virus, but maybe reservoir depletion would be because that is one of the goals regardless of what we're doing, so I think that's a term that I think is safe to use, it's a little obscure, but it's safer to use, I think. And in terms of the studies, you know, our partner Nelson and I are hoping to get funding to do a second study, and we want to do it this time not on	1 2 3 4 5 6 7 8 9 10	Education Network, Denver. So I don't like the "cure" thing. And just a real quick little anecdote. When the ACTG reformed into the TSGs, and they always have the short names for everything, like in the old days, you know, TRAD (ph) and OpMan and OPART (ph) and all that. So they were coming up with a name for us, and the actual name of that, Cure TSG, it's not a Cure TSG, it's HIV reservoirs and viral eradication. So I suggested, why	241
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	of a cure but to kind of make it seem more like it's more advanced research than what's available now. And also to piggyback on the informed consent, I think in creating an informed consent, it's important to allow the individual to understand that		given to that process and maybe it needs to be a multimodality process, but I'm wondering if you have more to say, and within as you think about what that process would look like, if there are any other specifics. We've already heard Lynda say that we should really be very cut and dry, very clear, that it should say you will not get benefit from this trial if there are no projected benefits, but if there are other examples that you have for us about how to explain the risks or benefits, we would like to hear those, too. MS. DEE: You know, I wonder, Murray, and I think maybe Jeff, talked about this earlier, you know, I think human beings, you worry about what's happening to you now and what you're going through now and if you're suffering side effects now and maybe that will go away and you don't want that to happen again. You know, that's more of a reality than, okay, well, maybe you'll get cancer. Well, maybe I won't, you know. I mean, that's more far away and we'll worry about that later. So I think if there is a way to and I	
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2 3 4 5 6 7	research or participating in the research, that they will get satisfaction in knowing that them participating in the research will potentially help others. DR. EGGERS: Okay. So Sara asked a question earlier that I'm going to revisit about who should be doing do you want to restate your question about should it be with the investigator and the person who should be well, you state it better than I did. DR. GOLDKIND: So what I'm trying to drill down and understand better is, what would be an ideal consent process so that we could really feel comfortable that we've allowed the potential participant to analyze the risks and the benefits and alternatives for himself or herself, and they've had the opportunity to ask the questions that they need to ask to understand that calculus for themselves, and that the investigator or whoever is doing the consent process would have a sense that the participant understands what's being asked? So you started to touch on it a little bit	2 3 4 5 6 7	know a lot of informed consents that I've seen list what the risks of these other things are, but, I mean, you know, if you could put into I mean, if you could put in there definite information about what the percentages of, how many people does this happen to and how many years from now? It may be that if I have a life- threatening disease, that I ain't going to worry about what's going to happen 20 years from now. You know? So if you could be more definite about not only the risk, but what the real risk of that happening to you is. Does that make sense? DR. EGGERS: Can I follow up and say, how would you characterize uncertainty if you couldn't give those if you couldn't give as clear-cut numbers that you're looking for, that you, as the person deciding to participate, if those numbers don't exist, how would you communicate the uncertainty about that? MS. DEE: I mean, you just have to say that. We've been doing Phase I trials for how many years have you guys been in existence? But there have been Phase I trials that do this all the time. So I really	

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1	think it's important to say we're uncertain about	1	DR. EGGERS: Oh, David. I'm sorry.	
2	you know, I like really short sentence, boom, boom,	2	MR. EVANS: No, I just wanted to give a	
3	boom, boom, and I think that's easier for people to	3	process suggestion, and that's that I mean, you,	
4	read than some long rolling sort of paragraph.	4	I'm sure, you know this better than I would know it,	
5	DR. EGGERS: Celia.	5	of course, be it you're a decision-making scientist,	
6	DR. WITTEN: And to add to that uncertainty	6	but I think that how we pose the opportunity for a	
7	about what the risks are and how to quantify them, we	7	decision to people is so critically important, and I	
8	are interested in communicating for some of our	8	think if you simply say, "Do you have any more	
9	treatments that the treatments have perhaps an	9	questions?" you get one answer. I think even if you	
10	indefinite residence in the body. In other words,	10	5, 5 1 5	
11	unlike the therapies that have been so far under	11	some time to think about it?" you get another answer.	
12	investigation or development, some of the ones in our	12		
13	office may last, so the risks may be lifetime risks,	13	,	
14	and that is a bit different, you know, it makes it a	14		
15	little less, well, it's something in the future,	15	5 5	
16	because sometimes I think people think, "Well, I'll	16		
17	withdraw the drug, and then after a certain period of	17		
18	time, that risk is not there," which I think is often	18		
19	true, if you didn't have the risk in the short term,	19	y	
20 21	you may not get it in the longer term. DR. EGGERS: So there is a	20 21	I'm sorry. And then Tim. MR. MUNK: Hi. I'm Bob Munk, from the AIDS	
21	MR. PENNER: I think to the extent that that		InfoNet. And I have long been concerned about the	
	WIK, I ENNER. I unit to the extent that that		intolvet. And I have long been concerned about the	
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	247			249
1	247 is potentially happening if you go off of a treatment	1	patient consent process because there is no	249
1 2		1 2	patient consent process because there is no disinterested party or no third party involved. I've	249
	is potentially happening if you go off of a treatment and it's going to remain in your body as best you know, that has to be said so clearly up front even	1 2 3	disinterested party or no third party involved. I've	249
	is potentially happening if you go off of a treatment and it's going to remain in your body as best you know, that has to be said so clearly up front even though you may not know what the risks of that	1 2	disinterested party or no third party involved. I've been to some investigator meetings that are like the most cheerleader kind of things that you could	249
23	is potentially happening if you go off of a treatment and it's going to remain in your body as best you know, that has to be said so clearly up front even though you may not know what the risks of that happening are, that's got to be really those are	1 2 3	disinterested party or no third party involved. I've been to some investigator meetings that are like the most cheerleader kind of things that you could imagine, you know, "Yea, you've enrolled 34 at your	249
2 3 4	is potentially happening if you go off of a treatment and it's going to remain in your body as best you know, that has to be said so clearly up front even though you may not know what the risks of that happening are, that's got to be really those are the kinds of things that have to be explicitly stated,	1 2 3 4 5 6	disinterested party or no third party involved. I've been to some investigator meetings that are like the most cheerleader kind of things that you could imagine, you know, "Yea, you've enrolled 34 at your site." Of course, your goal is 50. And there is a	249
2 3 4 5 6 7	is potentially happening if you go off of a treatment and it's going to remain in your body as best you know, that has to be said so clearly up front even though you may not know what the risks of that happening are, that's got to be really those are the kinds of things that have to be explicitly stated, and then you can get into kind of the mumbo-jumbo	1 2 3 4 5 6 7	disinterested party or no third party involved. I've been to some investigator meetings that are like the most cheerleader kind of things that you could imagine, you know, "Yea, you've enrolled 34 at your site." Of course, your goal is 50. And there is a lot of pressure on these research nurses to produce.	249
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	an Ivy League prep school? 8th grade at an inner city school? 8th grade at a school on the border in El Paso, Texas? And to Tim's point, I think that videos are something that can transcend all of those grade qualities, if not levels, and certainly you can't have a video of every aspect of informed consent, but if	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DR. EGGERS: We'll go down the row. MR. DOROSH: I'm going to tag again on what Tim was talking about in terms of a video. I don't know about where you all live, but where I live, when you get called for jury duty, you have to sit and watch this video, and it's very simple, it's very basic, it's aimed at anybody, and it tells you about the whole trial process and the defendant and all the rest of it, and you just sit there and you watch that and then you kind of know a little bit more. And I don't know if you guys could do this, but I'm just wondering if the FDA could create, you know, a really good slick, quick, maybe 5 minutes or	
22	you can show a video of procedures and maybe have	22	less, video just on cure research in general that's a	
	25			253
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	interviews of people that have gone through those procedures that have had good results, bad results, that can be very helpful. The other thing is one of the hurdles that I perceive is the community members or research participants you would be looking for aren't necessarily the ones that have gotten the most education regarding research. So those of us that have volunteered our time to learn, to understand, to be able to speak to our peers in lay terms, we're in some ways cut out of that informed consent process due to HIPAA and other things, we can't go out and actively recruit for trials, we can't sit in the lobby of a research site and talk to people before they go in and meet with a study nurse. I'm not saying we shouldn't have privacy and confidentiality, but if the people that we're looking to get into research trials are those that are not necessarily in the know, they're newly infected, they're in acute infection, they're going through crazy thoughts in their head about their diagnosis, yet they're the ones that we would really like to be	2 3 4 5 6 7 8 9 10 11	requirement of anybody who is considering entering a clinical trial before they even get to the informed consent process, something like that. I don't know if that's possible. I don't know if IRBs would freak out on that. That's one thing to consider. When you look at the word "informed consent," "consent" is easy, that's yes or no, you consent to let the guy in your lane when you're driving. "Informed" is information, it's informing, and really need that more and more and more in this whole arena. At our pre-CROI community cure workshop this year we identified that educating and informing the community, our HIV community, about this whole field is crucial, and it's an unmet need right now, and we're currently trying to come up with ways to do that. There are national publications, videos, a number of other things, but I think it's really, really important and I just lost my train of thought. It needs to happen the informed consent, I think it needs to start with the information dissemination.	

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			254			256
	1	Oh, what I was going to say was a bunch of		1	test, number one. Call it a survey or whatever. That	
		us put out all kinds of fires after those press			freaks people out. But also don't disqualify people,	
		releases, the daily telegraph, all that crap that was			but you have them have another opportunity to learn	
	4	going on. I was getting e-mails. It was crazy what			the information so that you might be able to use them	
	5	was going on. I mean, we all knew good Kate was		5	in the study.	
	6	pregnant before she was pregnant in this day and age.		6	MS. DEE: You know, if this was a	
	7	DR. EGGERS: I hear a recurring theme about			requirement, I bet the docs would find a way to get	
	8	needing to start earlier than actual informed consent,			somebody in there to actually explain what they were	
	9	and my colleagues can echo on this. I think it needs		9	supposed to be knowing. Right?	
	10	to be reiterated that drug development is the FDA		10	DR. EGGERS: Oh, we have someone. Okay.	
	11	has a part in that, and so I hope that there are other		11	MR. SCHAICH: Yeah. Three things. One is	
		folks hearing what you're saying.			that certainly it would be far from me to say anything	
	13	Discussion with FDA Panel		13	bad about video, I love it, but I think it's important	
	14	DR. EGGERS: Does anyone want to comment on		14	to get the the nice thing about a video is you can	
	15	the theme of sort of general education about research?		15	custom make it for the culturally and ethnically	
		Not to put any of you on the spot.		16	specific and languages, et cetera, so it makes it	
	17	DR. SHERWAT: Actually, it's not that, but		17	really a buy-in for the people that it needs to	
	18	I'm wondering, do you think there is any utility in,		18	address and work with.	
	19	say, a post-test process where you go through the		19	The other one is I think it's really	
	20	informed consent process and then you have a very		20	important to consider families who that person feels	
	21	brief focused test that you take that covers the most		21	is important in their decision making process, and	
	22	salient points, covering the biggest risks that have		22	make sure that happens because I've heard I don't know	
L						
			255			257
	1	to do with whatever this type of research is, and	255	1	how many meetings like this where people said they	257
		to do with whatever this type of research is, and unless the person is able to pass that, say, on one or	255		how many meetings like this where people said they were pulled from the trial by their husband who were	257
	2	unless the person is able to pass that, say, on one or	255	2	were pulled from the trial by their husband who were	257
	2 3		255	2		257
	2 3	unless the person is able to pass that, say, on one or two attempts, you just feel like they're not getting	255	2 3	were pulled from the trial by their husband who were outraged that they were in this trial in the first	257
	2 3 4	unless the person is able to pass that, say, on one or two attempts, you just feel like they're not getting these points and they're not going to be someone that	255	2 3 4	were pulled from the trial by their husband who were outraged that they were in this trial in the first place. So I think it's important to have that	257
	2 3 4 5 6	unless the person is able to pass that, say, on one or two attempts, you just feel like they're not getting these points and they're not going to be someone that really should be in that type of a trial?	255	2 3 4	were pulled from the trial by their husband who were outraged that they were in this trial in the first place. So I think it's important to have that discussion as a part of the process before they get	257
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 already. DR. EGGERS: Thanks for clarifying. We'll go to David? MR. BRAKEBILL: I'm just curious. You know, one of the models that's really worked well on the care side is the use of pure navigators and the possibility of using somebody to do the informed consent who has been through a trial before. I think you sort of alluded to it when you said using people that have been in the video, "I did this," and so and so forth, but I think that that may be one way, a better way, to engage people to get into trials but also keeping them in, that you also have some sort of peer support system that once they're in a trial, to keep them engaged in the trial. It's been very successful in the Ryan White CARE system for keeping people in CARE and engaged in CARE, and I think it's the same sort of principle with research. DR. EGGERS: Murray? MR. PENNER: I recently became or heard a presentation of a doctor in Denver that had done some 		1MR. PENNER: Sure.2DR. EGGERS: Okay. I'm going to do a time3check. We are at 4:35, which is, according to the4agenda, the end of the large-group facilitated5discussion, but we don't have any public comment6signed up. Am I correct in that?7(No audible response.)8DR. EGGERS: Okay. So we are shaving some9time off. So I think that given that it's a Friday10afternoon in June, and I'm thinking it's gorgeous11outside, I think we can cut the meeting a little bit12short and still make sure that we have gotten done13with all the questions and all the points that we want14to make. So my suggestion is that we can try to close15out and see if FDA has any further questions. And16then if you have any remarks that you want to make,17we'll do that. And then we'll ask Theresa Mullin to18come up. And between this and Theresa, we'll have if19there are any web comments, we'll summarize those.20So if you're on the web, this is your sort21of final chance. We can't promise that we'll review22all of them, but if you have something that's really	
 keeping patients in CARE, and I think this could be applicable. They did on the initial arrival of the patient to the clinic had a kiosk where they were asked a series of questions related to substance use and homelessness and the kinds of things that a doctor might not either be comfortable talking with the patient about or have time to or whatever, but it was an anonymous kind of way of getting some input from that patient early in the process of an entire visit, and they showed some incredible outcomes as a result of that. So I'm wondering if there could be some things like that that could be built into an informed consent process either on a tablet where you answered some questions and then came back later and the could be a pre- and post-test to really kind of see where you're going, but it's not called that, and you think you're interacting with the whole process that way. DR. EGGERS: Could you include that in the docket? If you write to the docket, include that in 	259	 different than what you've heard said here today, you can include that. MS. DEE: Sara, before we leave this DR. EGGERS: Yeah. MS. DEE: You know, I don't know, I feel like we really haven't done justice to this informed consent thing. I mean, I think it's broken the way it is now, and I think we've been around the rosie, but I wonder if there is anything else we could do to work with Sara directly to convene something to talk about this, just this one aspect, a little bit more to make some recommendations or something. I don't know. I not sure what you are allowed to do and what's within your purview as far as the informed consent processes but I think of all the things that we've talked about today, this might be the most important, and I think we've probably given you the least concrete information. MR. KLEIN: Hi. If I could make a quick comment. What we could do is put together a webina through my office and continue a conversation that wa 	ŗ

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4 5	But before we close, I don't want to stand in between us and a beautiful day, but I did want to see if anyone had any more specific comments about how we could sort of chip away at this idea of the therapeutic misconception, whether there are any suggestions about how people can understand that they're enrolling in research that's not going to be designed to treat them specifically but that the care they get is going to be protocol driven. MS. DEE: "There are no known benefits to you participating in this trial." MR. SHARP: Just really quickly, I think one	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	just said, that, you know, this is not consistent with, you know, U.S. Public Health Service recommendations, you know. There could be risks that we don't know what these are. And it has to just be as clear and as simple as what Lynda and David were talking about. UNIDENTIFIED MALE SPEAKER: "Kids, don't try this at home." MR. PENNER: Yeah. MR. EVANS: Well, and I think also it depends on the population that you're studying. I think if it's people who have CD4 counts in the 750 range and they happen to already be on therapy, that's one kind of consent in process. If someone had a CD4
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1	263 conducted is not consistent with the federal		265 study, they need to really understand that SMART study
2	guidelines on treatment for people living with HIV,	$\begin{vmatrix} 1\\2 \end{vmatrix}$	
	and I think that should be in every consent form, only	3	
	because it's true. And recommended medical practice	4	company Olympic
	is one thing, and research is another, and I think	5	ROBERT: I want to thank all of you from the
	making that very clear in a consent process is	6	ROBERT: I want to thank all of you from the FDA that are here for all your hard work. I'm
8	making that very clear in a consent process is important. It might dissuade some people from	6 7	ROBERT: I want to thank all of you from the FDA that are here for all your hard work. I'm wondering if you could just comment generally about
1 0	making that very clear in a consent process is important. It might dissuade some people from participating, but you know what? That's great	6 7 8	ROBERT: I want to thank all of you from the FDA that are here for all your hard work. I'm wondering if you could just comment generally about the sequester and what effects it's going to have on
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10	making that very clear in a consent process is important. It might dissuade some people from participating, but you know what? That's great because if they understand that and they don't want to participate, it's good that we knew that, you know.	6 7 8 9 10	ROBERT: I want to thank all of you from the FDA that are here for all your hard work. I'm wondering if you could just comment generally about the sequester and what effects it's going to have on your funding and what your plans are, the constriction that might come for your research.
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1	a job, and we have a meaningful job. So I guess in	1	to whatever in terms of the interruption in any	
2	the end it hasn't really directly affected us as it	2	informed consent. For example, if somebody is taking	
3	has perhaps some other agencies. But we're still	3	efavirenz, you know, there is a whole protocol for how	
4	continuing to do the work that we are asked to do by	4	you interrupt that therapy, you just don't stop it	
5	the public.	5	like all at once, and that needs to be conveyed, and	
6	MS. DEE: Deb, and that travel can be a big	6	again some people really get it and some people really	
7	thing, though. I mean, you don't get to go to	7	don't, so that can be a very tough thing.	
8	research meetings, where they just presented, where	8	And then general education again. I know a	
9	you can interact with researchers and industry.	9	young guy in his twenties just infected a couple of	
10	DR. BIRNKRANT: Well, that's true. Right.	10	years ago, he acquired a resistant virus, and so they	
11	MS. DEE: I mean, that's a really important	11	had to like adjust his regimen or whatever, so now	
12	thing.	12	he's on a specific regimen, he knows that, and he	
13	DR. BIRNKRANT: You're right.	13	wants to do like the Sangamo zinc finger trial,	
14	MS. DEE: It's not like you're going to	14	heterologous still to 32, and he's like, "Oh, I can't	
15	Paris; right?	15	interrupt because I have this resistant virus." Well,	
16	DR. BIRNKRANT: No. We haven't been to	16	really, couldn't he interrupt if it works? You know?	
17	Paris in a long time.	17	, , , , , , , , , , , , , , , , , , ,	
18	But we do participate in webinars and we go	18	know, but that's part of this whole information thing	
19	to local AIDS and hepatitis meetings, and we give our	19	that really has to happen before the informed consent	
20	talks on the phone to large groups. Kim just did one	20	and definitely be a part of that for that individual.	
21	on long-acting therapies, and others have done similar	21	DR. EGGERS: Anything else from up here?	
22	presentations via phone. You're right, though; it's	22	Adam?	
	267			269
1		1		269
	267 not the same as being at the meeting, networking, et cetera.		DR. SHERWAT: Just a couple of questions	269
	not the same as being at the meeting, networking, et			269
2	not the same as being at the meeting, networking, et cetera.	2	DR. SHERWAT: Just a couple of questions that I had jotted down.	269
2 3	not the same as being at the meeting, networking, et cetera. DR. COX: And there may also be some new	2 3	DR. SHERWAT: Just a couple of questions that I had jotted down. DR. EGGERS: Great.	269
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1	are going to have to talk about treatment		1	is a theoretical risk of cancer, but you were only	
2	interruptions that are longer than 16 weeks at some		2	giving them a single dose, it was a small dose, and	
3	point, and I think we need to start thinking about		3	you didn't see risks of cancer in the you know,	
4	that just because there may be therapies where the		4	additional cancers in the cancer studies, so I think	
5	stopping rule is that your CD4 count falls below 500		5	that was a reasonable go decision to make.	
6	or your viral load climbs back up above 50, and if		6	So I think it's hard to say it in the	
7	someone hasn't met that stopping rule, should they be		7	theoretical because it really depends on the therapy	
8	allowed to continue on their treatment interruption,		8	that you're looking at. I think it's important that,	
9	and what might that tell us scientifically? So I		9	though but I think there are two other important	
10	think those are the things that I think about when it		10	things about studies. One is that I think it's not	
11	comes to treatment interruptions.		11	always just about the safety of the drug, it's about	
12	DR. SHERWAT: Besides the population that		12	the trial design, and I think we have a real	
13	you would be choosing as far as choosing the safest		13	obligation if we're going to ask people to donate	
14	population, are there any particular risks inherent to		14	their bodies and lives to these things to make sure	
15	the drugs that might be used or that the genetic		15	that the trial is designed, as best as it can, to get	
16	manipulation that you think would be something that we		16	the answer that you're going for. And I think a	
17	shouldn't allow to go forward? Do you think that		17	perfect example of that and we were talking about	
18	should also be up to the patient to make that		18	it earlier today in a different meaning are the	
19	decision?		19	assays that you use to determine latency.	
20	MS. DEE: It depends on if it's been four		20	You know, the Siliciano study came out and	
21	people and three of them died. I mean, you know, it's		21	said that there was absolutely no correlation between	
22	kind of you have to be a little bit more give us a		22	six different assays. And so what do you do about	
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		271			273
1	little bit more information about do you see what	271	1	that? Well maybe you require that they have to do	273
	little bit more information about do you see what I'm saving?	271		that? Well, maybe you require that they have to do three, you know, three different ones, to prove that	273
2	I'm saying?	271	2	three, you know, three different ones, to prove that	273
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	terms of some of these riskier procedures and drugs being used so far, and that may be because of you guys. But it's true, I think they're really being and actually some of the biotechs are, too; others aren't. DR. EGGERS: Anything else? Okay, yes, go ahead, Jeff. MR. TAYLOR: Well, you know, and I think most of these processes have already been in place for a long time to ensure patient safety, and I think we need to rest assured that they are in place, and as everybody said, evaluate each therapy as it comes up, but on the other hand, I hate to see us become overly paternalistic to patients and not let them make decisions because these are their lives and they're allowed to make that decision. So there needs to be a	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	And then a few other comments about the informed consent process. One comment echoes what we heard about education, especially those on the front line, i.e., the research coordination staff because of the lack of time on the part of principal investigators. And also echoing the comments about videos with pre- and post-testing. And also a suggestion about study participants taking part in half-day or full-day training at a local ASO or health department. Finally, we have a few comments. Someone commented it might be interesting to the community that there is a Generic Drug Regulatory Science Initiatives Public Meeting that the FDA is holding on June 21st about the public discussion of agency generic drug research priorities and an overview of current efforts. And then, finally, we have someone else who commented that maybe an HIV 101 document would be helpful, a long legal 20-pager, and then a short 2-	
21 22	balance. DR. EGGERS: Okay, with that, I think we'll	21 22	pager that is really for the patient. Those are just a few of our comments.	
	275			277
2 3 4 5 6 7 8	done. As Theresa is making her way up to the front, I'm going to ask Andrea just to see if there are any web remarks. MS. TAN: There were actually quite a few comments on the webcast, and I apologize, I won't be able to summarize all of them, so just bear with me as I sift through them. We have some comments based on our earlier discussion about clinical trials and the case of a trial that shows therapeutic benefit in an immunologic non-responder with a doubling of T cells. And the comment asked: How can the FDA help provide a clear pathway for further development of the therapy? We also have a comment about incentivizing patients to take part in cure research in clinical trials. I think that's a new thought, that it might be a standard and often necessary practice, but would patients be willing to take more of a risk if they received an incentive or medical care during a cure	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DR. EGGERS: Great. All right. And with that, I will thank the panel members, and I will thank the folks in the audience and the folks on the web. I think this has been some great input. I have learned a lot today. I think Theresa is going to probably echo my comments. And with that, I will turn it over to Theresa, Theresa Mullin, to give the closing remarks, and then we'll be done. Closing Remarks DR. MULLIN: Okay. Well, I guess I really am the last thing between you and a beautiful weekend, so let me try to finish up. And I want to thank you so much also for coming here to this meeting and giving us the benefit of your very thoughtful perspectives, a lot of great ideas. I'm not even a transcriptionist, and I took 21 pages of notes. So I'm going to spare you most of my notes, but on the other hand, I want to sort of say a little bit of what I took away from what we heard today. And so on the patient perspectives on current approaches, just hearing about the critical	

	2	278			280
1	importance of paying attention to comorbidities and of		1	achieve that.	
2	including people in trials who really are like the		2	And that there might be specific benefits	
3	real population that has HIV and also considering the		3	that different folks mentioned. Money may be	
4	drug- drug interactions for those drugs that you have			something that some will want to include in their	
5	to take to treat the comorbidities, the adherence to			calculus of whether or not they want to participate,	
6	your regimen and changes in the regimen and the			high quality care, access to high quality care that	
7	concerns about changing the regimen, trying to find			they might not otherwise have, and, of course,	
8	ways to ease administration and concerns that no more			clinical benefits if there are any.	
9	drugs in the same class might be getting developed,		9	And that you made the point I think	
10	and so there may be fewer options going forward for		10	repeatedly that this is a very individual decision and	
11	new therapies in those classes, the same in any class.			that the individual's perspective has to be reflected.	
12	And the special challenges we heard earlier			And another observation that came after that I think	
13	for many of the pediatric populations because there			was that there are critical subpopulations that are	
14	are various age segments and times when people become			not here today, that the young and maybe minority	
15	HIV- positive, the prospect of having the rest of your			populations are not here, women populations are not	
16	life on therapy and the earlier age at which you			here, and that their perspectives are going to be	
17	experience the side effects from those therapies, and			critical to take into account.	
18	things just like night terrors, which are also harder		18	So all of that about what people need to	
19	for young children probably or children to have to		19	understand to see whether or not they even are willing	
20	contend with.			to participate in this kind of cure research led us	
21	And then in terms of perspectives on cure			very I think nicely to the informed consent process	
22	research, I mean, one thing I clearly heard is that		22	discussion. And the point was made, at least that I	
	2	279			281
1	you're not making a participation decision from the	279	1	heard, that paper forms today, they're often long,	281
1 2	you're not making a participation decision from the same perspective that patients made it when the	279	2	they're not clear, they're not particularly quantified	281
	you're not making a participation decision from the same perspective that patients made it when the epidemic began, you're at a very different place, and	279	2 3	they're not clear, they're not particularly quantified or helpful, that people don't necessarily even go	281
2	you're not making a participation decision from the same perspective that patients made it when the epidemic began, you're at a very different place, and available therapies that work, they work pretty well.	279	2 3	they're not clear, they're not particularly quantified	281
2 3	you're not making a participation decision from the same perspective that patients made it when the epidemic began, you're at a very different place, and available therapies that work, they work pretty well. You're looking at potential loss of what you have from	279	2 3 4	they're not clear, they're not particularly quantified or helpful, that people don't necessarily even go through a careful reading let alone understanding of them.	281
2 3 4	you're not making a participation decision from the same perspective that patients made it when the epidemic began, you're at a very different place, and available therapies that work, they work pretty well. You're looking at potential loss of what you have from that therapy, so you're at a very different place in	279	2 3 4 5 6	they're not clear, they're not particularly quantified or helpful, that people don't necessarily even go through a careful reading let alone understanding of them. And the process today may be a little bit	281
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3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Washington, but many of you have come from the West Coast, so I hope you didn't travel during that storm yesterday. Maybe you were riding in right behind it or something. But thanks again for coming, and we'll look forward to any comments you have or information you want to send in on the docket. We view these meetings as like the beginning in some ways or somewhere in the middle, but certainly		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	CERTIFICATE OF COURT REPORTER I, NATALIA THOMAS, the Court Reporter before whom the foregoing proceeding was taken, do hereby certify that the proceeding was recorded by me; that the proceeding was thereafter reduced to typewriting under my direction; that said transcript is a true and accurate record of the proceeding; that I am neither related to nor employed by any of the parties to this proceeding; and, further, that I have no financial interest in this proceeding. <u>NATALIA THOMAS</u> Digital Court Reporter	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Development and HIV Cure Research was adjourned.)	283	5 6 7 8 9 10 11 12 13 14	28 CERTIFICATE OF TRANSCRIPTION I, DEBORAH ARBOGAST, hereby certify that I am not the Court Reporter who reported the proceeding and that I have typed the transcript of the proceeding using the Court Reporter's notes and recordings. The foregoing/attached transcript is a true, correct and complete transcription of the proceedings. Date DEBORAH ARBOGAST Transcriptionist	:5

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