FOOD AND DRUG ADMINISTRATION
CENTER FOR TOBACCO PRODUCTS

TOBACCO PRODUCTS SCIENTIFIC ADVISORY COMMITTEE (TPSAC)

Open Session

WEDNESDAY, MARCH 2, 2011
10:30 a.m. to 3:00 p.m.

9200 Corporate Boulevard
Rockville, Maryland

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<th>Page 5</th>
<th>Page 6</th>
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DR. SAMET: Good morning. I think we'll go ahead and start the meeting. I'm Jon Samet, the chair of the Tobacco Products Scientific Advisory Committee. I want to welcome you and thank you for joining us. I want to make a few statements, and then we will introduce the committee.

For topics such as those being discussed at today's meeting, there are often a variety of opinions, some of which are quite strongly held. Our goal is that today's meeting will be a fair and open forum for discussion of these issues, and that individuals can express their views without interruption. Thus, as a general reminder, individuals will be allowed to speak into the record only if recognized by the chair. We look forward to a productive meeting.

In the spirit of the Federal Advisory Committee Act and the Government in the Sunshine Act, we ask that the advisory committee members take care that their conversations about the topics at hand take place in the open forum of the meeting.

We are aware that members of the media are anxious to speak with the FDA about these proceedings. However, FDA will refrain from discussing the details of this meeting with the media until its conclusion. Also, the committee is reminded to please refrain from discussing the meeting topics during breaks. Thank you.

Caryn?

MS. COHEN: The Food and Drug Administration is convening today's meeting of the Tobacco Products Scientific Advisory Committee under the authority of the Federal Advisory Committee Act of 1972. With the exception of the industry representatives, all members and non-voting members are special government employees or regular federal employees from other agencies and are subject to federal conflict of interest laws and regulations.

The following information on the status of
this committee's compliance with federal ethics and
counter of interest laws, covered by, but not
limited to, those found at 18 U.S.C., Section 208
and Section 712 of the Food, Drug, and Cosmetic Act, is being provided to participants in today's
meeting and to the public. FDA has determined that
the members of this committee are in compliance
with the federal ethics and counter of interest
laws.

Under 18 U.S.C., Section 208, Congress has
authorized FDA to grant waivers to special
government employees and regular federal government
employees who have potential financial conflicts
when it is determined that the agency's need for a
particular individual's services outweighs his or
her potential financial conflicts of interest.

Under Section 712 of the FD&C Act, Congress has
authorized FDA to grant waivers to special
government employees and regular federal employees
with potential conflicts of interest, when
necessary, to afford the committee essential
expertise.

Related to the discussion of today's
meeting, members of this committee have been
screened for potential financial conflicts of
interest of their own, as well as those imputed to
them, including those of their spouses or minor
children, and, for purposes of 18 U.S.C.
Section 208, their employers. These interests may
include investments, consulting, expert witness
testimony, contracts, grants, CRADAs, teaching,
speaking, writing, patents and royalties, and
primary employment.

Today's agenda involves receiving an update on the Menthol Subcommittee and receiving and
discussing presentations regarding the data
requested by the committee on the March 30-31, 2010 meeting of the Tobacco Products Scientific Advisory Committee. This is a particular matters meeting,
during which general issues will be discussed.

Based on the agenda for today's meeting and
all financial interests reported by the committee
members, no conflict of interest waivers have been
issued in connection with this meeting. To ensure

In this room, I would also like to identify the
FDA press contacts. They are Jeffrey Ventura and
tesfa Alexander. And if either or both of you are
here, could you please stand up?

Thank you very much.

Introduction of Committee Members

DR. SAMET: Thank you. Let me now ask the
committee to introduce themselves. Actually,
beginning -- let's see.

Mark, are you back on the phone?

DR. CLANTON: I am back online.

DR. SAMET: Why don't you go first?

DR. LAUTERBACH: I work for Lorillard Tobacco Company.

DR. CLANTON: And Mr. Hamm is retired.

FDA encourages all other participants to
advise the committee of any financial relationships
that they may have with any firms at issue.

I’d like to remind everybody to please turn
off your cell phones completely if you have not
already done so. They interfere with the PA system

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(4) Pages 13 - 16
Australia, and a voting member of the committee.

DR. HATSUKAMI: I'm Dorothy Hatsukami from the University of Minnesota.

DR. BENOWITZ: Neal Benowitz, University of California San Francisco.

DR. NEZ HENDERSON: Patricia Nez Henderson, Black Hills Center for American Indian Health.

DR. HENNINGFIELD: Jack Henningfield, Pinney Associates in Bethesda and Johns Hopkins Medical School in Baltimore.


DR. ASHLEY: David Ashley, FDA.

DR. DEYTON: Lawrence Deyton, FDA.

DR. MCAFEE: Tim McAfee, Center for Disease Control.

DR. BACKINGER: Cathy Backinger from the National Cancer Institute, representing the National Institutes of Health.

MR. HAMM: Arnold Hamm, representing U.S. tobacco growers.

DR. LAUTERBACH: John Lauterbach, Lauterbach & Associates, representing the small business tobacco manufacturers.

DR. HECK: Dan Heck of the Lorillard Tobacco Company, representing the tobacco manufacturers.

DR. SAMET: Thank you.

Before we get going, let me just point out that while the agenda shows us going until 5:00, it would appear that the majority of the committee members have flights that will necessitate them leaving by approximately 3:30. So while some of you may be saddened by the shortening of the meeting, so be it.

What that means, actually, is that after lunch, we will just proceed straight through our business, and I think we will have ample time to discuss the matters on today's agenda.

So let me turn to David Ashley.

FDA Presentation – Menthol Report

DR. ASHLEY: I am going to give just a brief introduction. For those of you don't know me, I'm David Ashley. I'm director of the Office of Science here at the Center for Tobacco Products.

If you haven't heard this before, I'm surprised, but I'm going to go ahead and say it again. The charge to the TPSAC is to produce a report and recommendations on the impact of the use of menthol in cigarettes on public health, including such use among children, African-Americans, Hispanics, and other racial and ethnic minorities. And that report is due March 23rd, 2011.

Next, I want to talk a little bit about what to expect from the report. We have one more full committee meeting scheduled right now for March 17th and 18th, in just a couple of weeks. The report itself is broken down into eight chapters, and I'm not going to read this slide. You all can look at that, and if you've got your own handouts, you've got it in front of you.

From what I understand, there is a possibility that some of these topics may actually be shifted around. All the topics will be covered. All the topics will be there. But just to make a little bit more equality in some of the chapters, there may be just some movement of some of the topics in those chapters, and that's still under discussion.

The final report will be made available to the public on FDA's website once it has been reviewed for redaction of any commercial confidential or trade secret information. And then once that report is received, FDA will consider the report and recommendations of the committee, as well as other scientific evidence concerning menthol cigarettes, and make a determination about what actions, if any, are warranted.

There is no required deadline or timeline for FDA to make such a determination, and any sale or distribution restrictions or product standards will be implemented through notice and comment rule making.

Status of the information requested by TPSAC. The model on the effect of menthol on initiation and cessation is still in progress, and David Mendez will be presenting on this later today and giving us an update on that.
Since the last meeting, FDA has responded to some TPSAC requests. For example, some data from the state of Massachusetts product analysis was made available. FDA has also provided information that was submitted by the public to the committee. And other than public submissions to TPSAC, FDA will not provide any additional data or information for inclusion in the report because that deadline is coming up very soon.

Then, a little bit, briefly on today's meeting. The topics for today's meeting, first, we had a very short closed session earlier this morning, where we discussed commercial confidential trade secret information from industry document submissions. And then this is now the open meeting, where there will be information from industry document submissions on Topic 8, which can be shared publicly; an update on the model of the impact of menthol on initiation and cessation. We will have public comments and a discussion of drafts of chapters 3 and 6, and then updates on chapters 4, 5, also chapter 7 and the industry perspective.

The questions posed to the committee for this meeting today: What comments do the TPSAC have regarding the proposed model that is presented, and what feedback does TPSAC have regarding draft chapters 3 through 7?

DR. SAMET: Questions for David?

[No response.]

DR. SAMET: I might just note for the record, in fact, that the drafts that are posted are just that; they are drafts. So as the committee has posted drafts, they are there for the public to review and comment, but I think until our report is final, I would just want to remind everyone that these are, in fact, draft chapters.

Thank you, David.

DR. ASHLEY: Sure.

DR. SAMET: So I think, then, we'll go onto the presentation by David Mendez, from the University of Michigan. And, David, thank you for joining us again.

Presentation – David Mendez

DR. MENDEZ: Good morning. I am here to present preliminary results from the model that I'm building regarding the prevalence of menthol smoking. And so I'd like to point out that these results are totally preliminary at this point, and any results and the work reported here is just my own and does not reflect any of the opinions of the FDA.

So this is the model, as we have been discussing, that's a compartmental model in which we have birth rate, and that keeps track of initiation, both menthol and non-menthol, and keeps track of former smokers. So the model divides the population into menthol smokers, non-menthol smokers, former smokers, and never smokers, and keeps track of them from 2010 to 2050 from the ages 0 to 100. The former smokers are followed, not just by the years, by age 0 to 100, but by years quit, so every former smoker is followed up to 30 years of years quit.

So this is the structure of the model that we discussed before. And during the last meeting, we were talking about the parameters that we needed to populate the model. And these are the parameters that I'm using in the presentation that I'm going to share with you today. So we have, in the data that are needed for the model so far, the proportion of menthol initiation. That proportion of menthol initiation, at the initiation, at age 18, what is the proportion of smokers that are menthol smokers? And I have a central estimate of 40 percent.

Now, the proportion of menthol experimentation is 45 percent. It's the proportion of people that experiment, in between ages 12 to 17, that are smoking menthol. And we have a central estimate of about .45.

The ratio of experimentation to becoming a regular smoker -- that's at the ratio between menthol and non-menthol -- we have an estimate of 1.61. That means that an experimenter with menthol is 61 percent more likely to become a regular smoker.
So the scenario where there is no menthol is

started with the same prevalence that we have in
2010 with menthol, except that we have a tiny
difference at age 18 because my initiation rate is
the prevalence at age 18. So to be consistent with
the model in the counterfactual, the prevalence at
age 18, we have to reflect the new initiation rate
of 17 percent. Everything else is going to be
exactly the same.

Then I'm going to present a comparison
between what would happen, with these scenarios, if
there is menthol and those parameters hold, and
what would happen if there is no menthol. And then
I'm going to track -- I'm going to start
accumulating initiation and death and prevalence
from 2010 to 2050. And I'm going to take the
difference between those scenarios and the
counterfactuals, and that's what I present as
excess cumulative differences. So when I talk
about excess cumulative death or excess cumulative
initiation, it's going to be the difference in
accumulation from 2010 to the specific year that we
are looking at between the scenario where there's

menthol and the scenario where there is no menthol.

So this is the derivation of what would
happen with an initiation rate if we are in a
situation where there is no menthol. So if we
assume that there is no menthol -- so we have a
proportion of people that are experimenting, which
is 30 percent, and we kept that constant. But,
actually, that's not really in the computations.
The proportion of experimenters who smoke menthol
is 45 percent, and the proportion of experimenters
who smoke non-menthol right now is 55 percent.

I'm calling these yields, the yield from
experimenter to becoming a smoker. And we know
that we have the best estimate for the ratio of the
yield as 1.61. So given that the current
initiation rate is 21.8 percent, that 21.8 percent
came about with these computations. So we have a
proportion of experimenters that smoke menthol and
have a yield -- through the cites of the current
cohort and the proportion of experimenters that
smoke non-menthol, have a yield, and that combined
yield has produced the 21.8 percent.

The mortality ratio, non-menthol to menthol,
we have a central estimate of 1, meaning that they
have the same mortality or health effects, but we
have sensitivity between .8 and 1.2. And switching
rate from menthol to non-menthol, from year to
year, I mean the annual switching rate, we have an
estimate of .6 percent for menthol to non-menthol,
and from non-menthol to menthol, .5 percent.

With that, I'm going to show you these are
the settings for the scenarios that I constructed
and I'm going to present today. So all these
scenarios, all of what I did is that you have these
central scenarios. So I present one output of the
model with the central scenarios, and then varying
each one of the sensitivity parameters that you
see; at least on those tables, that are also
presented, keeping everything else constant.

The setting of the model is such that we
start -- the oldest scenarios, the current
conditions start and keep the initiation rates,
which is the prevalence of age 18 in this model of
21.8 percent. That's consistent with NHIS 2009.

Now, the counterfactuals, so we are going to
compare the model in a universe where there's no
menthol, and then that's the counterfactual. The
counterfactual uses an initiation rate which is
prevalent at age 18 of 17 percent. And I'm going
to show you how we ID'd that 17 percent, why that
17 percent comes about.

The counterfactuals assume that menthol
smoking does not exist. And if menthol did not
exist, then at 2010, we would have a different
prevalence than we have today, smoking prevalence.
But I have absolutely no basis to assume any
different prevalence. So I chose to start at the
same prevalence that we have in 2010.

So the scenario where there is no menthol is
So, with that, I figured out if we know that the ratio from the yields is 1.61, I figured out what the yield for non-menthol is. And then now that we know what the yield from non-menthol is, assuming that there's not going to be any menthol and the same proportion of experimenters, now, all the experimenters are going to experiment with non-menthol, and they're going to have a lower yield to become regular smokers. If we follow that consistency of the approach, we found that the initiation rate will be, in that specific scenario, around 17 percent.

Now, with that, then I presented the comparison of the scenarios with the central parameters. What I call a scenario is the situation where there's menthol and the counterfactual situation where there is no menthol. So I understand that, in the right column, in the input, there is actually no menthol, but I just want to make sure that I used the right parameters to derive the conditions for non-menthol. That's why there are some parameters listed on the right.

For example, we have an initiation rate of 17 percent under the counterfactual. It's proportional, and that was derived under the assumption that there is a proportion of menthol experimentation under the scenario that is menthol, of 45 percent and the ratio of yield of 1.61. I also have the overall cessation rates. That's the one that was estimated previously there. Actually, we have estimated it in a previous research project. What I want to say there -- we've listed that in the counterfactual -- is that the cessation rates will adjust -- for the non-menthol, have adjusted appropriately to reflect that 95 percent. So the idea is, in this scenario, in the actual scenario, the overall cessation rates are the ones listed. And those, because there's a proportion of menthol and a proportion of non-menthol, then I derive, on that scenario, the specific rates for menthol -- the cessation rate for menthol and non-menthol that match that ratio. And those specific rates for non-menthol are the ones that are used in the counterfactual, so I just wanted to make sure that the counterfactual matched exactly the scenario that we're coming from.

The same thing is going to happen with the menthol mortality multiplier. I put one there, meaning that these mortality rates are the same. So in the case where we are going to change the mortality rates with menthol and non-menthol, then, given the proportion of menthol and non-menthol, the prevalence by age of menthol and non-menthol in 2010, then those mortality rates are going to change by age for menthol and non-menthol. I want to make sure that that's reflected in the counterfactual when I change to the counterfactual.

DR. SAMET: David, can I interrupt you for just a second, to make sure? Where you have, under counterfactual, the 45 percent, you've replicated that twice. Wouldn't that be -- in our counterfactual would that be we don't have menthol?

DR. MENDEZ: We don't have menthol.

DR. SAMET: So you've actually carried over. I just wanted to clarify for everyone.

DR. MENDEZ: Yes, yes. It's zero.

DR. SAMET: That would be zero, and where you have experimentation -- initiation ratio, menthol, the second 1.61, again, is just simply replicated. They really don't belong there?

DR. MENDEZ: It's replicated.

DR. SAMET: I just wanted to make sure everybody understands that.

DR. MENDEZ: Yes. That's why I used it. I just wanted to clarify. It was for me to make sure that I use the same parameters, too.

So then the model -- let's go to the right side -- keeps track in every big compartment. The compartments are many in this case because it's age and years quit, et cetera. So I just aggregated, by big compartments, the scenarios and the counterfactual, and reported the prevalence from 2010 to 2050 under the scenario and the counterfactual.

Also, I kept track -- the model keeps track of the cumulative death from 2010 to 2050, and then reports the difference of the cumulative deaths
between the scenario and the counterfactual. So there is some switching within the compartments, as you can see. And I just posted that to make sure the model was working correctly. And the flow is conserved correctly.

The relevant point, the relevant columns are the ones marked in yellow. So from 2010 to 2050, that's the difference in cumulative death, and in the second market, the last row, the total difference in cumulative initiation. The difference in cumulative initiation is going to be at age 18, the difference between that 21.8 percent and 17 percent. So you're going to see that's very constant across scenarios because we didn't change those parameters.

So now we have the sensitivity analysis of the relevant parameters, or the parameters for which I have sensitivity values. And the proportion of menthol initiation drops to 35 percent. So if the prevalence or if the proportion of menthol smokers at age 18 right now is the 35 percent instead of 40 percent, we have a central estimate. These are the total number of cumulative deaths. And if it is 45 percent, then that would be the total number of cumulative deaths, up to 319,596 in 50 years. If the cessation ratio of menthol to non-menthol changes to .9 instead of .95, that's going to be the results of 322,392.

I checked that the results are consistent with the changes in the parameters, so they are representing -- the numbers are moving in the right direction in all cases. If the cessation ratio, menthol to non-menthol, is 1, then that means high cessation. This is what we have. If the mortality ratio, menthol to non-menthol, is .8, then in this case, menthol is less harmful than non-menthol.

You see an interesting factor in the total number of deaths. They will go up and then -- first, in the counterfactual scenario, there are more deaths than in the normal, in the world with menthol. But this is not consistently going up. It goes up and then the difference is an inverted U-shape.

There are two conflicting things in this model. First, menthol is less harmful, but at the same time the prevalence is dropping, so the protective effect of menthol is becoming less and less as we move forward. So actually, the model was working. I was interested to see that non-linearity was very well captured by the model. If menthol is more harmful for regular cigarettes, the non-menthol cigarettes, this is the scenario that we are going to end up with. These are the results of the model.

At the end, there's a summary of tables, a summary of scenarios, just summarizing the results of the model here, and the total cumulative deaths and total -- the excess death, the difference between the scenarios and the counterfactual in both and the total excess number of initiators just from 2010 to 2050. So that's the last volume.

So that's where I am right now, so I would appreciate any comments and questions.

DR. SAMET: So thank you, David. And I think there are a number of issues that we should talk about. One is beginning to fill in some of the ranges on the parameters that are not included. And I think as we complete our reviews of the chapters over the next week or so, we should be able to provide you with some ranges.

I just want to restate, and correct me if I have this wrong, so that everybody is on the same page as to what the "counterfactual" is, remembering that the counterfactual, by the nature of the word, is what does not exist.

So the comparison states the what does not exist is the United States in 2010, as it would have been had there never been menthol cigarettes, based on the parameters that David has used to develop the model.

DR. MENDEZ: Correct. And the only caveat is that if we had never had menthol, the prevalence in 2010 would have been different than what we have now, but I don't have any basis to know what that prevalence would be, so I chose to start at the same prevalence that we have in 2010.

DR. SAMET: Then the projections are with
the existence of menthol cigarettes versus this
comparison state, projected out over time, just to
be as clear as I can.

DR. MENDEZ: Yes.

DR. SAMET: Then I think, again, as I look
at the table of parameter estimates that you used,
I think there are some that we want to fill in.
Let me ask you a question. David reminded
us that the report is due March 23rd, and the
possibility of having a more focused model, perhaps
for African-Americans, do you think that's likely
or unlikely?

DR. MENDEZ: It depends on how soon you can
give me parameters for that. I can try. Right
now, the model is working correctly, as far as I
can tell. It's generating more than 200,000
numbers every time it runs. But there are a lot of
different checks of flow, of comparison of what
it's projecting for the total population of the
U.S.

So the issue is the model is extremely
segregated, so when you aggregate the model, you
should produce numbers that are reasonable, that
have been published elsewhere. And the model is
all producing the same estimates, so I have those
checks done. So it's producing the same population
for the United States. It's producing the same
projected prevalence from other different models,
aggregate prevalence of smoking for all the
different models under this scenario. So there are
a lot of different checks that I've made to give me
some confidence that the model is working
correctly.

Now, the issue is, once the model is built,
running for different populations is
straightforward. It's time consuming, but
straightforward, so if I have the parameters, I
think we can have something.

DR. SAMET: Thank you and we will see if we
can develop those for you, I think, given our
charge to look at particular populations.

So let me ask, who has questions for David?

Dan?

DR. HECK: Yes. Thank you, Dr. Mendez. A
question for you and perhaps for the committee to
ponder, if nothing else. We heard mention at the
prior meeting, the natural experiments we see
around the world, there are a number of countries
where menthol is essentially absent from the
market: Italy, Portugal, Austria, Argentina, Spain,
Greece. That is 1 percent or less of the market,
according to Nielsen data. In those countries, we
see youth smoking and adult smoking rates at least
as high, in fact, markedly higher than the U.S. If
the committee embraces this model as an accurate
prediction of this hypothetical situation, how can
that challenge be addressed, in terms of is the
model an accurate predictor, based on world
experience?

Not necessarily a question for you to answer
here, but I think we need to think about this as a
committee. It's a lot to absorb in one session.

DR. SAMET: Yes. My first response, then,
would be that the model itself is reflective of
what has happened in the United States, based on
the best parameters that we can develop from data
that are available. So it is a United States-
attuned model, and we have not tried to build,
let's say, a model that would be at the population
level, using information across countries. And, in
fact, I would argue that that's probably extraneous
to our task.

I don't know if any other committee members
would like to comment here.

DR. WAKEFIELD: I think the situation in
other countries is that they have different policy
environments, which really does influence uptake
and cessation as well. So I think it's sensible to
stick with a model that very much reflects the
United States.

DR. SAMET: Arnold, did you have your hand
up before?

MR. HAMM: Yes, I did.

Dr. Mendez -- or maybe this is a question
for the committee -- is there any place in this
model that accounts for contraband and self-
mentholation?

DR. MENDEZ: No. The model is not
reflecting what would happen if something happens to menthol. The idea is if menthol had never existed. The situation right now with menthol is business as usual. The counterfactual is, menthol never existed.

MR. HAMM: Okay.

DR. MENDEZ: So to answer your question, no, but that's not what we're trying to compare.

DR. LAUTERBACH: Yes. Dr. Mendez, what concerns me here is the assumption that if menthol didn't exist, the initiation rate would be less. And then, you say this assumes that menthol never existed as a cigarette or never was a cigarette flavor; yet, what does the model say if menthol stopped now?

DR. MENDEZ: I didn't do that. That's not the experiment that I did. Again, the assumption of the model is menthol didn't exist.

DR. BENOWITZ: I just have a clarification question. Can you go to the block diagram, the menthol cigarette prevalence model?

DR. MENDEZ: Sure.

DR. BENOWITZ: I'm just trying to figure out where the number, the proportion of menthol experimentation, comes into this model. I can see the other parameters, where they sit. But where does proportion of menthol experimentation sit in the model?

DR. MENDEZ: So this part was done with algebra. Right? So that's the portion of the model that just computes the new initiation rate.

DR. BENOWITZ: Okay. Thank you.

DR. SAMET: There are others. Let's see. Mark, do you have questions?

DR. CLANTON: No. Actually, the most recent discussion answered most of my questions, so thank you.

DR. SAMET: Dan?

DR. HECK: Just a very brief follow-on, Mr. Chairman, to your comment and Dr. Wakefield's. We have seen presented -- and I won't go and tell them that again -- with regard to the U.S.

situation, a couple times, the slides and graphic data, from Nielsen or other sales data, demonstrating, in the domestic U.S. situation, a disconnect between no relation, in fact, an inverse relationship between the popularity of menthol cigarettes and youth smoking rate, for instance. Granted, states in the U.S. do also vary, state by state, by their tobacco control policies and such.

So just a cautionary note, the real situation in the U.S. and around the world do indicate some complexities that may not be projected by the model.

DR. SAMET: I think it's fair to say that it's hard to capture the real world in a model. I agree.

Tim?

DR. MCAFEE: While I do appreciate this sort of struggle with the focus on the counterfactual model, which I think is one way to look at this, I guess the one thing that I would posit around this is that this is probably the most conservative way to look at this situation, because the reality is that what would actually happen is not that we would go back into the past and eliminate the effects of whatever menthol would be. The reality is that 40 to 45 percent of people would be faced with the reality of not having menthol cigarettes available. And you could discount that by some smuggling function or something like that, but that, clearly, there would be a disruptive impact that would lead to some fraction of people making quit attempts.

The small amount of evidence that we've had given to us so far around that, being both what smokers would prefer, around having menthol removed, and then what their intents would be, would suggest that this might be a significant effect.

So, again, I would just assume that this is -- assuming that the numbers were accurate, this would be the most conservative estimate of what would actually happen in the future.

DR. SAMET: Yes, Dan?

DR. HECK: Yes. Thank you, Dr. McAfee. I
guess you're referring to the single telephone survey that we heard presented partially at the prior meeting. I would agree that that's a smaller amount of evidence. And we have seen similar surveys of smoker attitudes and opinions of smokers, generally, some major proportion expressing an intention to quit, for instance. I don't recall an exact number.

So I would just -- as a cautionary note, that a survey such as that, again, may not be an accurate projection. It's a difficulty we all face in trying to project the future of actual behaviors.

DR. MCAFEE: I completely agree with the notion that you can't. But, clearly, I think it was 50 percent of African-Americans and something in the low 40s for all menthol users. And it's not like we would actually expect that that many people would end up quitting as a result of something like this. But on the other hand, it's true that something in the nature of 60 to 70 percent of smokers not only say they want to quit, but say they intend to quit sometime in the next 6 to 12 months. But the reality is, they don't all, but two-thirds of them actually do make a quit attempt longer than 24 hours. And the probability that they will quit is much higher if they express an intention to quit than if they don't.

So although I completely agree that you have to have some discount mechanism, which we've not tried to model in this, I certainly think it would be higher than zero. And everything else, from what we know of the relationship of intention to action, would suggest that we would create an effect. I think you're right. It obviously would not be 50 percent being successful.

DR. SAMET: Jack?

DR. HENNINGFIELD: Dr. Heck, what I'm wondering about is are you concerned about the accuracy of the model or are you challenging the general prediction that taking menthol out would substantially reduce smoking and mortality?

DR. SAMET: Just a reminder, before you do that, of what the counterfactual is. It's the world as it would have existed, absent menthol, compared to maintaining menthol as it is now.

DR. HENNINGFIELD: Yes.

DR. SAMET: So just to make sure that the counterfactual is -- I think you alluded to a different possibility.

DR. HENNINGFIELD: Yes. But that's what we're using the model to try to I think help sort out.

DR. SAMET: I think the model, at least from my perspective, is to help us address our charge of public health impact and try and have some way -- not that I think we want numbers in ones, twos, or threes, or something, but to have a general sense of what public health impact might be. I mean, I recognize that there are multiple potential counterfactual scenarios, and perhaps some others might be addressed in the future, depending on policy needs. But I don't think, between now and March 23rd, we're going to be exploring too many different scenarios, Jack.

DR. HENNINGFIELD: I agree, and I guess my point is that we use this as a tool to help predict. And, frankly, I'm not sure that it's relevant how precise it is. And so picking around the edges of the precision I think misses the point. I think raising other countries completely misses the point. We're using it to better understand what has happened in the United States, what may happen in the United States, in a country where -- what is it -- around 18 percent of the population smokes menthol cigarettes. And the concerns of the companies that you represent is that there would be a substantial decrease in the market.

DR. HECK: To try to get your point, Jack, I would not dispute the fact that the elimination of any market segment -- call it 100-millimeter cigarettes, call it light cigarettes or former light cigarettes, call it cork-tip cigarettes, call it hard-boxed cigarettes. Elimination, statistically and modeled, of any market segment would certainly be projected to have some influence.
on people's preference of smoking and their product choice. So I don't dispute that you can produce a number projections with this. My only concern is that for the real intent of this model, albeit more rearward-looking than forward-looking, is the effect of any dramatic action that FDA might choose to take. That's the real reason we're asking this question. So I don't dispute the fact that any product segment becoming unavailable would have an effect on smoking.

DR. SAMET: Just to remind us we're here to talk about this particular model and the presentation by David, I do think we, as a committee, need to look further at the parameters in the model. And I think with this further update on the results, make sure we have a full understanding of what the model is about. Let me ask, are there other questions?

[No response.]

DR. CLANTON: I'm here.

DR. SAMET: Thanks, Mark.

DR. MENDEZ: Let me make, also, again, the clarification that there is no assumptions in this model. All the parameters that have been used have come from somewhere, and they have been derived. And they are available, publicly available. But it's not something like what if this happens. The parameters are real.

DR. SAMET: Good. Thank you very much, David.

So I'm going to suggest that we move to some of the materials that are listed as post-lunch, probably the discussion of chapter 3, Neal, and perhaps, chapter 6, and that we move onto those. I think Neal's slated for 1:30, sort of the updated discussion on chapter 3, which, of course, has been posted. So I don't think you have any slides for this, but I think we're just going to have a verbal discussion of the evolution of this chapter, which has been posted.

Chapter 3 - Neal Benowitz

DR. BENOWITZ: Thanks, Jon.
There are data in smokers that smokers who are more sensitive to bitter tastes are less likely to smoke cigarettes, and certainly there is a biological plausibility that menthol might, in particular for such people, reduce bitterness and enhance the tolerability of tobacco smoke.

The final section is evidence synthesis, and the first one was, does menthol have cooling or anesthetic properties that moderate the harshness of tobacco smoke? And the evidence is sufficient to conclude that menthol has such properties.

The second is, does nicotine make low-tar, low-nicotine cigarettes more acceptable to smokers? And the evidence is sufficient to conclude that menthol does do that.

The third is, does menthol have an effect on metabolism of nicotine or tobacco-specific nitrosamines? And here, the evidence is sufficient to conclude that it is at least as likely as not that menthol inhibits nicotine metabolism and possibly inhale metabolism of smokers. However, it's not clear that these effects are translated into any effects on smoking behavior or toxicity.

The final section addresses whether it is biologically plausible that menthol enhances the addictiveness of cigarette smoking. And the evidence is sufficient to conclude that it is biologically plausible that menthol makes cigarettes more addictive. And a number of mechanisms are discussed here, including modulation of nicotine effects; the importance of sensory factors in nicotine addiction; and citing animal studies where taste and smell enhance self-administration; the fact that sensory experiences contribute to conditioned aspects of smoking behavior; and, again, citing basic psychology studies.

The fact that stimuli associated with drug intake, such as perhaps menthol, can evoke craving that promotes presumption of self-administration of the drug in a period of abstinence, certainly, the question is raised about whether menthol is a stimulus, and someone trying to quit smoking, it could trigger relapse. And these mechanisms have
been described in animal studies.

That's basically the conclusions. Now, we will be adding some additional studies on sensory pharmacology, which have come up since this last version, and I think that's basically it.

DR. SAMET: Thank you. Thank you, Neal. And, of course, we have had an opportunity to discuss this and the chapter's been posted and available.

Are there questions or comments? John?

DR. LAUTERBACH: There are a variety of menthol levels in cigarettes. And it seems that, at least looking at cigarette sales of these different brand styles, particularly the low-volume sales of cigarettes with very high menthol levels or deliveries that could be obtained through smoking the cigarettes more intensively or differently than on the various smoking machines -- it would appear that if menthol was increasing the addictiveness of tobacco, we see quite a bit of a different distribution among the sales of menthol styles with some of the ones that are extremely unpopular now. If your hypothesis were true, would be the ones that would be most popular because those are the ones that would give the smokers the most dose of menthol.

DR. BENOWITZ: On the literature that's reviewed, it indicates that menthol does different things at different levels, both of which could be important. At lower levels, it really serves as a cooling and soothing effect, reducing the harshness of cigarettes. At higher levels, it's more on impact and a taste.

So it seems clear that people smoke menthol cigarettes for different reasons, and some reasons are seen at low menthol levels and some reasons are seen at high menthol levels. So I don't think that this is as if a person were self-administering menthol and trying to get higher doses. I think they're getting different effects from menthol at different levels of menthol.

DR. SAMET: Jack?

DR. HENNINGFIELD: Just to add to that, it's consistent with other addictive drugs as well. In the case of alcohol, the largest problem among young people isn't with vodka; it's with beer and lower concentrations. It doesn't take away from the fact that alcohol is addictive. And we, again, see the same thing with other drugs, opioids as well, where there is a segment of the population that goes for the highest strength opioids, like intravenous heroin, in the broadest range of uses for formulations that are not as powerful or concentrated.

Actually, there's just a wealth of experience with other drugs that is consistent with these conclusions. The concept that you can increase addictiveness by increasing the ease of drug exposure is basic, whether you're trying to establish addiction in animal models, as I did in my own research, or in humans.

Crack cocaine, as Dr. Hatsukami and myself and others have found, that form did not make the molecule cocaine more addictive. It made it easier, and more acceptable, and greatly increased our nation's problem with cocaine.

So the idea that a substance can make it easier to expose yourselves to dangerous levels is not unique here. There are a lot of other examples with other addictive drugs that are very consistent here.

Finally, the importance of taste, smell, other sensory stimuli, have been recognized as important for other addictive drugs for more than a half a century. And most recently, a lot of brain imaging research is showing that stimuli associated with drugs, be it cocaine, heroin, or cigarettes, can trigger relapse, or cravings rather, and even other withdrawal symptoms. So there's a lot of evidence from the drug addiction literature as a whole that is very consistent with what is very succinctly presented in this section.

DR. SAMET: Let me ask a question. Are you suggesting that this chapter should reinforce, buttress, allude, to this larger literature?

DR. HENNINGFIELD: I think, right now, it has -- I don't think it needs to be turned into a surgeon general's report. I'm not sure. I don't
recall if the ADA report, nicotine addiction report, is referenced, but that reference alone covers an awful lot of this territory, perhaps a few more references.

But right now, I think it covers a lot of the ground. I think the important thing is that, to those of us that are familiar with the broader addiction literature, this fits like a puzzle piece very nicely. It's not an outlier.

DR. SAMET: Thanks. So perhaps, some allusion is broader literature.

Dan?

DR. HECK: Yes. I have a number of comments and issues with this first draft. I understand it's a first draft. But just to try to follow on to one of the later discussions here with regard to the level of menthol and experimental studies showing differential effects of cooling, and then other effects at higher levels, do we have a clear idea from the real cigarette tobacco smoke, the real most relevant studies here, of what those levels are and how they relate to those academically-determined levels for the local anesthetic effect?

I think that'll be an important consideration. It's a question not requiring an answer, unless you know it off-hand. But I think I see, in this chapter, a recitation of the familiar and very interesting general pharmacology of menthol. We understand quite a bit about that. But I don't see a synthesis of those observations, usually in menthol in isolation in the animal studies or whatever, into a defensible support for some of the conclusions drawn here. There are some minor areas of fact that I've noted throughout. I don't have to go through all those. Synthetic menthol employed by the tobacco companies is not a DL-racemic mix. It's 99 plus percent pure L-menthol. That citation was attributed to a Lorillard submission, but I reviewed that, and I think it needs to be corrected to reflect that L-menthol is a synthetic form used in tobacco products.

Another question -- and I'm sorry I only had a day to read through this. I'm not quite sure whether it was in this chapter or in chapter 6, the statement that we've seen and heard in this forum before, that 90 percent of cigarettes on the U.S. market contain some menthol. I'd like to get that corrected. That statement, as near as I can determine, was delivered by Dr. Giovino in the first menthol conference in a review presentation. I've looked for the authoritative substantiation of that and been unable to find it.

I think we've heard discussion already about the low levels of menthol that are employed in some proprietary top flavorings and things like that, far below the taste threshold, or certainly the pharmacological threshold, I think. We've heard testimony from Altria, for instance, who commands 50 percent of the market in the U.S., that they do not employ menthol in their non-menthol brand. So right there, you have a sense that the statement that 90 percent of the cigarettes have some menthol, it can't be true. So I think we should not continue to cite that particular factoid, which in my own reading I haven't been able to substantiate.

DR. SAMET: I would say, Dan, let me interrupt, because you've already brought up several points, and it might be better to be a little --

DR. HECK: Yes.

DR. SAMET: -- consecutive here, perhaps.

I think on this 90 percent question, I know that's mentioned. I think it's Giovino, a 1994 publication. And this is cited in chapter 1. And, in fact, I went back and looked at it. And as I recall, it does make mention -- I'd have to go back -- to a paper on the development of analytic methods for menthol. And that 90 percent may relate to the particular cigarettes covered in that analysis. I would have to refresh my memory. But I think that is, in fact, where that particular point could be traced back to.

I think this is a point where, if you can guide us towards, perhaps, more authoritative sources or updated sources, that would be helpful.
I think on the first point, where you started -- and I think Neal needs to respond here, again. But is your suggestion, perhaps, that there might be references that could be included on this point that would be helpful in making chapter 3 run deeper in the literature cited? In other words, are you suggesting that we might have missed something? I guess I heard the point, but now I'm asking what next or what is missing?

DR. HECK: Yes. I apologize, Mr. Chairman, for going on. I have quite a number of comments. And some of these I think might be more efficiently transmitted in a subsequent e-mail communication or something. But I'm not aware of an authoritative reference for what's really I think at issue here.

I saw the calculation presented of -- we're trying to get to the local levels of menthol, at the tissue-smoke interface. And I don't know that that's a notable number. We've looked and tried to develop a similar estimate ourselves, but it's a difficult task.

On that topic, though, Neal, we saw an additional discussion in terms of the local level, hypothesizing that local menthol may be sufficiently high to inhibit lung, as opposed to liver, metabolism of nicotine.

Do you have a ballpark estimate of what percent of nicotine derived from smoking is, in fact, locally metabolized in the lung as opposed to the liver?

DR. BENOWITZ: There was one study, basically, I think in dogs, estimating 10 percent.

DR. HECK: Yes. I think that was the only study I was aware of, in an animal model as opposed to humans. The other, I think a major concern I have with regard to the metabolism question, is the part on the reported effects of menthol on nicotine metabolism and on NNAL metabolism.

I was a little surprised to see the relative strength of the draft conclusion here on the nicotine metabolism question because insofar as I'm aware, a well-done study in 2004, a clinical study of I think 14 smokers, did see this modest, maybe 10 percent, apparent effect on nicotine metabolism, developed not from the measured urinary deuterated metabolites, which were no different, but from apparently, a non-renal clearance.

That's the only paper I'm aware of that has seen that effect in human smokers. And we have, in the wake of that, a number of papers, including Strausser 2007 to 2011; Ho, et al., 2009; Wang, et al., 2010; in the very large total exposure study; Dr. Benowitz, a 2010 paper, not confirming that observation. So I just would question whether a single study, regardless of how well done, outweighs very large subsequent studies in human smokers that say that there's apparently no effect in the actual smoking situation.

I think that same comment might be applied to the NNAL metabolism assertion advanced by Muscat, et al., in 2009. Oh, and by the way, there's a misquote of the Richie paper on that topic in here. Richie, et al., actually the same group as Muscat, same subjects, and I think, same urine samples, as a matter of fact, in 1997, had come to the opposite conclusion, and that is that black race seemed to be associated with the lower relative glucuronide NNAL as opposed to the free -- in the later analysis by Muscat, et al., is the only paper, I'm aware of, that has seen that.

And, again, we've seen discussion from the large total exposure study and others, that this doesn't seem to be a reality in the actual, real-life smoking situation.

So I just would suggest these comments, and more extensive ones, to suggest that the strength of this draft conclusion might be reconsidered.

DR. SAMET: Neal, do you want to comment?

DR. BENOWITZ: Yes. I certainly think that with the NNAL issue, the larger studies don't seem to find an effect. There certainly is a biological plausibility based on in-vitro studies. The nicotine metabolism issue is more complicated. The only way to do a definitive study to look for a small effect is actually to give nicotine a measure of metabolism explicitly, and my laboratory's the only group that's done that.

When you look at the hydroxycotinine...
1 cotinine ratio, which is what the other groups have looked at, that is a marker of oxidative metabolism. But it's very variable, and it is all cross-sectional studies, as compared to a within-subject study. So the only gold standard study, it is small, and that's its limitation, but the highest quality study suggests that there's a small effect.

Given that, I'm not sure that it matters.

The NNAL effect, I think we could probably argue equipoise for that. But the bottom line for this chapter, in any case, is that I don't think either of these things plays much of a contribution in a bottom-line assessment.

DR. HECK: I would agree with that synopsis, but to the I guess supporting evidence for the NNAL assertion, which I agree the evidence is modest; in fact, that single study. But the in-vitro evidence presented in that particular study was I think quite limited in itself. It entailed a single vial of human S9 from three Caucasian liver donors and a two-hour incubation with, possibly, capacity-limiting levels of cofactors and levels of substrate, and menthol hundreds of times, and substrate millions of times, I recall, higher than physiological. So a single in-vitro incubation like that, I think doesn't provide a lot of compelling support for the single paper, Muscat asserting the NNAL effect.

Interestingly, too, I think that the Richie paper, 1997, from the same Muscat group, did actually -- it's buried in the human study. But they did a rat experiment in that same paper, looking at co-administration of NNK and menthol, and found, actually, an increase in the glucuronidation, glucuronidated NNAL excretion, rather than a decrease. So I think there's at least a small bit of in-vivo experimental evidence, also contrary to the assertion.

DR. SAMET: Other comments on chapter 3?

Mark?

DR. CLANTON: No additional questions.

DR. SAMET: Thank you.

Anyone else?
Now, one caveat for all of these studies is that they generally involve heavy, regular smokers. And the one question that still I think is not fully resolved is what menthol does to people who are smoking relatively few cigarettes per day, where there might be a reason to get as much nicotine per puff as possible. And none of these studies have really addressed very light smokers. The second section, or the biomarker studies, are larger studies. These are, in general, cross-sectional studies, and these looked at biomarkers of nicotine exposure, either cotinine levels or urine nicotine equivalents. They have looked at nitrosamine exposure. They have looked at polycyclic hydrocarbon and other tobacco toxins, and some have been quite large. In general, there is no consistent effect of menthol on exposure. So from these two sets of studies, I think we cannot conclude that menthol is associated with inhalation of more smoke or that menthol is associated with greater exposure to tobacco toxins.

DR. SAMET: Actually, why don't we do this in segments? Any comments on the elements of the chapter that Neal just presented? Dan?

DR. HECK: Just a brief comment. I know we've seen presentations by Dr. Sarkar of Altria of this large study and the special analysis of the 10-or-less smokers requested by the committee. And I realize this is not, I guess, published yet, but I think with the data having been shared with FDA and the committee, and the presentations that were given, and, generally, the quality of the study, and the papers that have been published, I would hope that this section would give that as full a consideration as possible because it's, in my mind, probably the biggest and best study that has been or ever will be done on that topic of biomarkers of exposure.

DR. BENOWITZ: The Sarkar study is included in the biomarker analysis.

DR. HECK: Yes. Again, I only had a day to review this, but if the treatment is anything other than fairly substantial, I think that the study is probably worthy of -- there's a lot of information in there that I think will inform several of these chapters, and I think it would be advantageous for us to take advantage of that to the maximum extent we can.

DR. BENOWITZ: Again, I should add also, there are tables that have not been finalized yet, that really summarize the studies. And so they include more detail from the Sarkar and Wang analysis. They're basically the same data set, in terms that there I think they measured main findings. So it will be expanded a little bit with those tables.

DR. SAMET: Any other comments for Neal? Yes, Jack?

DR. HENNINGFIELD: Part of the challenge of a chapter like this is that you have to look in isolation at the contribution of menthol to disease, specifically, but how it is linked to the population, the overall population impact of menthol, which is clearly greatest in African-Americans, where I think there's no question that if menthol wasn't there, there would be some reduction. We don't know how great. I guess the linkage, then, comes in the final conclusions, the overall. But I think even within the chapter, it would be useful to link the evaluation of the disease consequences of menthol to the overall population effects related to addiction. And, again, crack cocaine was an example where that greatly increased our nation's population exposure to cocaine, even increasing the risk of diseases like HIV/AIDS that weren't caused by crack, but that contributed. So I think someplace in this --

DR. SAMET: Yes. Actually, what you want is at the end of chapter 2. And I don't think it needs to be repeated there, but that's where we discuss the idea of models and the very important idea of the population attributable risk, describe what leads to population burden from any exposure in general, i.e., what you said, Jack, an increase in the population involved, exposed, or the risks. So we've set the stage there I think for exactly what you're saying. So I don't think we
need to allude back to that again in this chapter.

Dan?

DR. HECK: Just a quick general question, maybe for the Chairman or the FDA. These redacted sections that we see in some of these chapters, of course, I'm curious what they are, and I understand why they're redacted, I think, but it makes me curious as to whether any of the conclusions that are publicly available here were driven significantly, in a game-changing way, by those apparently confidential information.

DR. SAMET: I think, for one, obviously, the commercial confidential information has been redacted. Second, we are trying to make certain that all of the information that, for the moment, is said to be commercial confidential is, in fact, commercial confidential. We're doing some checking and I don't think -- so far, we've been trying to review the totality of the evidence and supply FDA with a report that covers the full scope of the evidence. I'm not aware of anything that's -- I'll use the word pivotal -- not revealed in the publicly available information.

DR. BENOWITZ: I would certainly add from my perspective that the redacted information does not influence the conclusions.

DR. SAMET: So before lunch, let me move on to just the last segments of chapter 6. And, again, this has been discussed before. I think what is new in this version is a brief and I think still rather selective review of some of the relevant toxicological information. Working with Neal, that's going to be augmented a bit. I think there's some question about the relevance of some of the fairly artificial systems, in which menthol or smoke from menthol cigarettes has been assessed. Perhaps, the more important other piece of the chapter is the review of the epidemiological information. Again, there will be a table describing the principle studies. I actually think we've discussed those studies at some length. Probably, commenters have also reviewed those studies. They're relatively limited in number in the fact it's essentially only for lung cancer that we have estimates of relative risk for developing this disease in menthol smokers versus non-menthol smokers, with multiple studies, and we're aware that there may be one additional study to cite.

I think those estimates have been discussed, and the general conclusion from those -- and, again, I will note that we're missing really sufficient evidence on both heart disease and chronic obstructive pulmonary disease through the major outcomes, diseases caused by smoking. But the overall conclusion, based on the evidence we had, is the one I read, that we can't conclude that there's a different risk in these diseases in smokers of menthol versus non-menthol cigarettes. So that is chapter 6. And let me ask if there are any questions either on the components I just covered or chapter 6 in total? Mark?

DR. CLANTON: No.

DR. SAMET: Okay. It's noon. It's lunchtime. I'm going to suggest that we try to reconvene at 12:45, given the constraints on the schedule, so that we make certain to discuss everything as fully as possible. So with that, let's all dash and find food.

A reminder to the committee not to discuss any of the meeting topics over the lunch amongst ourselves, with the press, or with any member of the audience.

(Whereupon, at 12:03 p.m., a luncheon recess was taken.)
AFTERNOON SESSION

(12:51 p.m.)

DR. SAMET: We are reconvening the committee meeting; if everybody could take their seats, please.

Caryn?

MS. COHEN: If you are planning to speak during the open public hearing and you haven't already signed up, please go outside and sign up just outside these doors here, and Tom Graham will help you with that and give you your number. Thank you.

DR. SAMET: Then we're going to proceed with the presentation by Eric Johnson from RTI. Eric?

Presentation – Eric Johnson

DR. JOHNSON: Yes. Thank you. I presume we'll do this like we did before. Right? So I'll just tell you when I need to switch the slides?

MS. COHEN: Yes, please.

DR. JOHNSON: So the topic for this afternoon that I'll be presenting is to follow up, quick fast, in the closed session of the -- I think it's February 10th meeting of the TPSAC. The disclaimer here is that the analyses and conclusions that are being presented in this presentation are those of the authors and RTI's and are not attributable to the FDA.

So, as I mentioned, the purpose is to respond to two specific requests for additional information following one of our prior meetings. The first of these requests was to examine the data available on analyses that might be stratified by age, in terms of switching between menthol and non-menthol cigarettes.

The second is to present data on switching within menthol brands to the extent possible, focusing on Kool as a benchmark for super high menthol and, again, to the extent possible, examine patterns of that within menthol-brand switching by demographic, length of time of smoking, and other characteristics.

So the first topic, switching stratified by age, some of these data, rates on switching by age group, were provided for all smokers and for current switchers from the Switching Book during the January public TPSAC meeting. And I've included those data here, and we'll review them briefly.

We also reviewed all of the submitted documents for additional stratified analyses by age, as well as looking at length of time of smoking current brand, the idea there being that if you've been smoking for less than or equal to a year, this is likely to include a significant proportion of switchers.

So these are the data that were presented from the Switching Book during our prior public TPSAC meeting, and they come from a national sample of smokers, approximately 34,000 smokers, who were interviewed in 1991 regarding their smoking behaviors.

This presented table breaks out those current smokers into several demographic categories, including our focus here by different age groups, and looked at switching from non-menthol to either another non-menthol brand or a menthol brand -- let's see, columns three and four -- or switching from a menthol cigarette to a non-menthol or to a different menthol cigarette, so essentially, both cross-flavor and within-flavor switching rates.

The numbers presented here, for example, if we focus on the first row for an age group, 18 to 24 years of age, we would interpret these numbers as 7.4 percent of this age group, who are smokers, switched from a non-menthol cigarette to another non-menthol brand of cigarette. Similarly, of the 18- to 24-year old smokers, 1 percent switched from a non-menthol cigarette to a menthol cigarette and so on.

So if we look across these age groups from 18 all the way down to 65 plus, we see a trend toward a higher rate of switching within younger age groups compared to older age groups, for three of the four comparisons that we're looking at. So switching from non-menthol to another non-menthol, from non-menthol to a menthol, and also switching
from a menthol to a non-menthol, there's some indication of higher rates of switching for the youngest age group of adults, 18 to 24. Now, this table from the same data examines the demographic characteristics of switchers, so this is restricted to people who had changed their brand of cigarette over that one-year interval. [Pause.]

DR. SAMET: Eric, we're back.

DR. JOHNSON: Great. As I was saying, this table presents data on the demographic characteristics of switchers, so it's limited to those who had switched brands of cigarettes in the past year. And the percentages in columns 3 through 6 are among each of these categories, so switched from non-menthol to non-menthol accounts for 2,000 cigarette smokers. And of those, 16.6 percent are in the age range of 18 to 24; 26 are between 25 and 34 and so on. So we, for most categories, did not tend to see, looking just at those percentages, a higher switching rate or a higher number of young adults among switchers, in contrast with the prior slide. However, that appears to be largely due to the representation of each age group in the number of smokers overall. That is, if you look at the second column, this is the percent of smokers included in the sample by age group, and we can see that the youngest age group, 18 to 24, accounts for 13.6 percent of all of the smokers. So for at least a few of these categories, it would appear that, relative to their representation in the smoking sample overall, the younger smokers do have higher rates of switching, even within these data. These data were identified as part of our review and have not been presented before. And they come from the Newport menthol category analysis, which examined the cigarette tracking study data from 1987 to 1989. In that sample, the overall rate of switching in the past year was 3.5 percent. And what the study presented in terms of an age breakdown or a stratified analysis is really specifically looking at menthol to non-
menthol switching, and particularly among Newport smokers. So we can see, from those data, the 18- to 24-year-olds represented about 13 percent of the Newport smokers, but they represented about 31 percent of those that were switching from the Newport to a competitive non-menthol cigarette. These were the only age-stratified analyses that were presented in that study.

So, overall, examining the rates of switching among all smokers, by age group, suggests higher rates of switching among the youngest adults, 18 to 24, except for the pattern of switching within menthol brands, where there did not appear to be a higher rate. Eighteen to 24-year-olds also may be disproportionately represented among cross-flavor switchers relative to the proportion of smokers they represent in the smoking population overall. Unfortunately, no additional or age-specific information was found for the length-of-time analysis, so we couldn't break down the smoking for less than or equal to one year across age groups in any of the data that we reviewed. So we're now changing to the second topic that we needed to address for response to the questions, and that was switching among menthol brands. We reviewed the submitted Topic 8 documents for brand-level analyses that would allow us to look at menthol brand switching. Four documents provided useful data. Three of them were reviewed here. One of them was reviewed this morning as a commercial confidential document. The available data in these documents largely focused on Newport, Salem, and Kool brands of cigarettes. The industry analysis of switching generally did not distinguish between non-menthol and menthol brands for those brands that had both. So, for example, Virginia Slims were not further broken down into menthol and non-menthol versions, which just really limits our analysis here. So the first of the three studies that we'll review is again from the Switching Book. That was that telephone survey of 34,000 current smokers.

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1. And the data provided really show analyses of switching to and away from selected brands over time, as well as by source and destination of brands, really as a percentage of brands of switchers. So we'll review tables and figures for each of these menthol brands in order, from Kool, Newport, and finally Salem.

2. So this is a table from the Switching Book report, and it tracks the overall rate of switching to the Kool brand and away from the Kool brand over time. So the second column is from the 1982 data, and they track this rate of switching all the way out to the 1991 data. And you can see in the third row of the table that there is a trend toward a decreasing percentage of switchers among the Kool smokers. That's actually switchers to Kool, so the folks that are switching into their brand as their new preferred brand of cigarette is dropping over time from 8.7 percent down to 2.6 percent.

3. In about the middle of the table, there is the row for switching from Kools, so the out-switchers or those that are being lost to a competitor brand. And, again, there's a downward trend, from 15 percent to about 8 percent over this time period from '82 to '91. It's interesting to note that the percentage of Kool smokers who are switching out or away from Kool in each of these years is greater than the percentage of those switching into the Kool brand of cigarettes.

4. Now, the prior slide was analysis of all switching into and away from the Kool brand. The report further breaks this down, looking at in-switchers, those that are moving to the Kool brand, and looking at the source of those switchers by company in the first row of this figure and by brand within company in the second row.

5. So you interpret this table -- this is from the 1991 data -- that about .9 percent of the overall 2.6 percent can be attributed to loss or in-switching from Phillip Morris brands. Of particular relevance for our question here, we have to look at specific brands of Salem, which is a menthol brand, and that accounts for about .3 percent Kool, which they actually include switchers who had switched from another Kool product to a current Kool brand. That accounts for about .5, and then Newport accounts for about .3 percent.

6. These are the out-switchers, the brands to which Kool is losing smokers. And, again, this is the 1991 data, so this is for the 8.2 percent of Kool smokers who are switching away from Kool. In the brand box under R.J. Reynolds, you see the Salem data. It's .3 percent. Under Brown & Williamson, switching to another Kool brand is about .5 percent, and switching to Newport under Lorillard is about 1.2 percent.

7. These are the same data or the same set of analyses for Newport. So, again, the third row shows us the percent of Newport smokers that had switched to Newport. It also shows a falling trend from 1982 to 1991 from approximately 11 percent down to 5 percent. The switchers from Newport, that is, the ones that they're losing, also shows this lower trend, from about 11.6 percent down to 4.9 percent. But in contrast to the Kool data that we had looked at just a few moments ago, the relative balance between switchers to Newport -- the ones that they're gaining -- and switchers away from Newport -- the ones that they're losing -- are about the same, year to year, so they seem to be in balance.

8. So breaking down the in-switchers by the brand from which they came, again, if we look under R.J. Reynolds, we find the Salem brand of cigarette, and that accounts for about 1 percent of the 5.1 percent; Kool, again about 1 percent under Brown & Williamson; and an alternative Newport brand, about .5 percent.

9. Out-switchers. So approximately .6 percent of the Newport smokers are switching out to a Salem brand of cigarette, .2 percent to a Kool brand, and .5 percent to an alternative Newport brand of cigarette.

10. Finally, the Salem data, our Salem series here, as with the other two brands, we see a falling trend in terms of the switching to Salem, as well as switching away from Salem -- I'm sorry,
I misspoke -- switching to Salem, we see the following trend, from about 12 percent to 3.8 percent over this time period. And in contrast to the other two brands, the rate of switching away from Salem holds relatively steady across time and is increasingly larger than those switching to Salem over this time period, again sort of suggesting a loss of market share for Salem, relative to the other brands.

So the in-switchers, where the current Salem smokers are coming from, again, if we look under R.J. Reynolds, an alternative Salem brand accounts for about .7 of the 3.8 percent overall. For Kool brand, it accounts for about .2, and Newport accounts for about .5.

Where are the Salem smokers going when they switch out to an alternative brand? In terms of the menthol brands, under R.J. Reynolds, Salem accounts for about .7 of that 10.2 percent; Kool accounts for about .2; and Newport accounts for about .8, so relatively small amounts of that overall 10.2 percent are accounted for by those other menthol brands.

So from the Switching Book, overall during this period, it looks like Kool and Salem saw greater out-switching than in-switching, suggesting reducing market share, while Newport saw a relative balance in terms of both gains and losses. Within brands, if we take those figures that were all in terms of the portion of the percent that they account for, we can see that for Kool, about 23 percent of the switchers came from Newport or Salem, while about 18 percent of the out-switchers went to these brands.

For Newport, about 40 percent of the switchers came from either Kool or Salem, while 16 percent of switchers went to these alternative menthol brands. And, finally, for Salem, about 18 percent of the switchers came from either Kool or Newport, while 10 percent of the out-switchers went to these brands.

So this is the second of the studies that provided some useful data, looking within menthol brand smoking. It was a telephone survey that was conducted in 1996, of approximately 2,300 menthol smokers, and these were divided across three developmental areas, and they're described here as high SDI, medium, and low. Unfortunately, SDI was not defined in the document, and so it's a little difficult to figure out what part of the marketing segment the report focuses on. However, among those included, we do know the eligibility criteria. They had to smoke at least five cigarettes a day and buy at least one menthol pack out of their average of 10 packs purchased; so 1 out of every 10 had to be menthol in order to be included in this study.

The information that they had, relative to the question of switching within brands, menthol brands, broke down into these two tables, the top table looks at the percent of each of these brands in the overall sample that switched in the past five years. So, overall, within the sample, approximately 27 percent of the smokers had switched their brand, preferred brand of cigarette, in the last five years. When you break that down, they looked at Newport, Kool, and Salem as the menthol brands, and about 16 percent of the current Newport smokers had switched to Newport in the past five years. Only about 7 percent of the current Kool smokers had switched to the brand within the last five years, and about 18 percent of the Salem smokers had.

The other piece of data that was available looked at the percent of brands that had been smoked among current Newport smokers, so further breaking down the 243 current Newport smokers in the sample by the percentage that came from different prior brands. And so, approximately 37 percent of current Newport smokers came from Kool, 4 from Salem, 28 percent from Marlboro menthol, and 15 percent from other Newport brands.

This is another one of the studies that we reviewed that provided some data on within menthol brand switching. It was, again, another household survey. This particular study had no dates, so we don't know when it was conducted, but it was among smokers, 21 years of age and older. There are...
about 3,000 participants. And they analyzed the two sets of relevant information, the length of time smoking their current brand, less than or equal to one year. This is the table available, among the LoFi or low-tar smokers, which was about 1,000 of the 3,000 subjects in the study. And within each of these brands, approximately 2.7 percent of the Kool smokers had been smoking Kool for less than or equal to one year; 7.4 percent of Salem smokers, and 7.1 percent of the Newport smokers had been smoking that brand for less than one year.

The second piece of relevant data was to look at the percentage or percent of brands among all switchers to or in this category. And among all switchers, a fairly large proportion were Newport smokers at 35 percent, Salem smokers 17.6, and Kool smokers, 5.9 percent. But, again, this is a relatively small number of people that contributed to this particular analysis, 34.

This is the last study that provides some data within menthol brand switching, and it was focused on characterizing Kool and Newport switchers. The data were derived from the 1992 cigarette tracking survey. And so for the Kool brand, of the 154 Kool smokers, 33 switched to another brand in the past year; 67 percent moved to a discount brand. So it did not distinguish between menthol and non-menthol, but some sense of where they were going. And in terms of demographic characteristics, about 63 percent of the switchers were female, 70 percent were white, and only 4 percent were in the younger age range of 18 to 24 years of age.

Newport smokers, approximately 23 of the 184, switched to another brand. Of those that are switching, 31 percent moved to Marlboro and 39 percent moved to these discount brands. Again, this is not distinguished between menthol and non-menthol. However, among switchers, 60 percent were female, again, 85 percent were white, and in contrast with Kool switchers, 38 percent were of a relatively young age of 18 to 24.

So, in summary, across the data sources, it appears that switching among menthol brands favors increasing market share by Newport, with reductions in Salem and Kool. There's some inconsistent evidence of differences, really, between switching brands and gender, looking across all of these studies.

We have a small of data that is stratified by race, and ethnicity, or age. From those data, it would suggest that the majority of menthol brand switchers were white, and that the age characteristics of switchers really differ by brand, with younger smokers constituting a larger proportion of switchers for Newport as opposed to Kool.

One important limitation of these analyses were that the data did not distinguish between menthol and non-menthol flavors within brands; so for the most part, distinguished between Marlboro and Marlboro menthol, or between varieties of Benson & Hedges, was not available in the data. And so we couldn't track that kind of menthol-to-menthol brand switching.

I believe that was my last slide. Any questions?

DR. SAMET: Thank you, Eric.

Questions? It was a very comprehensive review of some data we have been looking for. I guess, probably particularly, perhaps, Dorothy or Melanie, if you have questions, there's a lot to digest here.

DR. CLANTON: And Jon, Mark.

DR. SAMET: And Mark. Mark, if you have a question, go ahead.

DR. CLANTON: I do. Very nice report. In fact, we have been looking for a lot of this data around switching. I think some of it's fairly predictable when it comes to menthol. But my question actually for Jon, is, is it your intention to maybe use some of these data, switching data, to either populate more precisely the model, or is this generally going to be used as background information in your report?

DR. SAMET: There is an estimate, now, of switching in the model. These data might be used
to refine those estimates or give balance, or I
guess potentially make them more age-specific,
which would be another possibility, or if a model
is developed for African-Americans, then I think
these data would be useful. Also, I think there's
this question of what are the patterns of switching
at younger ages is relevant to trying to understand
the importance of early use and patterns of
menthol.

DR. JOHNSON: No. I would say that, in
particular, since we are searching for data that
would drive the model's assumptions for African-
Americans, it might be really good to think about
including some of this, relative to African-
Americans.

DR. SAMET: Melanie?

DR. WAKEFIELD: Yes. I suppose just a
limitation of these data, as I understand it, it
doesn't include people aged under 18. And some of
this data kind of reinforces how important getting
kids to smoke a brand before the age of 18 is
incredibly important, because after that time,
switching isn't really that common. So that is
something that I take away from these data.

DR. SAMET: Dan?

DR. HECK: I might offer a slightly
different takeaway. I think these data do
substantiate what has been presented in the marking
presentations, and that is that adult smokers are
the primary target of the marketing activities that
these sorts of market research or switching
research speak to.

DR. SAMET: Other questions for Eric,
comments?

[No response.]

DR. SAMET: Okay. Thank you, Eric.

DR. JOHNSON: Sure. Thank you.

DR. SAMET: So just to move on, then, we
have discussed chapters 3 and 6 before lunch, so I
think we have the public comment period at 2:00.
So we have, I think, time to proceed, at least
through chapter 4, and perhaps get started on the
two components of what is at the moment being
called chapter 5.
further here.

[No response.]

DR. SAMET: Let's go onto what we're calling chapter 5. These are likely to become two separate chapters. They're both fairly substantial in length and in the materials that they cover, one having to do with marketing, which Melanie will discuss, and the other having to do with initiation, dependence, and cessation, which Dorothy will discuss. And I think we have not discussed marketing yet today, so this is, really, our first discussion and airing of the approach, and then the evidence that's been identified.

Melanie, please?

Chapter 5 – Melanie Wakefield

DR. WAKEFIELD: So you'll recall that the last time we presented this chapter, Dorothy really took the lead on it. And we did have a little bit to say on what would be in the marketing section, but it was still very much in development.

Since then, quite a lot of work's been done on the chapter, and we have refined some of the questions that we propose to ask, and we also, as a result of some discussion, have placed some of the pieces that would have been in the marketing section into the initiation, dependence, and cessation section. And some pieces have gone to chapter 3 as well, I think, in relation to sensory experience. So it has kind of evolved.

The last time I talked about this section of the chapter, I indicated there would be -- I think it's roughly 85 references. And so that number has kind of varied, as we've apportioned different references here and there throughout the report, so a bit of a moveable feast, really.

So at the moment, the chapter is really, I think, focusing on -- starts out by looking at what is menthol marketing, how are menthol cigarettes marketed, and how is that similar or different to the marketing of non-menthol cigarettes. And the way that we've approached that is really to look at the marketing framework, which is used in the marketing of many products known as the four Ps, which is product, place, price, and promotion. And in some of those, different models, packaging is included as a fifth P as well, and we do that here.

So in this chapter, we first I think really put focus on the fact that, in many respects, the marketing of menthol is used as similar kinds of strategies to the marketing of non-menthol cigarettes, in terms of -- we have some description of the product itself, which kind of gives an overview of some of the brands.

We give an overview of the price of menthol cigarettes and non-menthol product. We've used material from industry submissions, from retail scanner data, and from some of the point-of-sale audit studies that have been done with store audits, empirical studies, and also data from population surveys.

These data do I think seem to be fairly consistent in showing that the price paid for menthol cigarettes is slightly higher than for non-menthol cigarettes, and that seems to be consistent across the different data sources that are used.

So as a category difference, that is a difference between menthol and non-menthol cigarettes.

That might mean that people who smoke menthol cigarettes value their cigarettes more. They're prepared to pay more for them. We looked at use of price promotions, and quite a lot of data and information was presented on that from various sources.

The scanner data I think show that in relation to convenience stores, which is the outlet where most smokers would buy their cigarettes, the use of price promotions does tend to be higher for menthol cigarettes then non-menthol cigarettes. And so that's interesting to note.

It also, I think from some survey data, shows that people are more likely to use price promotions to buy menthol cigarettes, and that is particularly the case amongst African-Americans. So the fact that people have to pay a little bit more for menthol cigarettes, they're more expensive, does seem as though they're going to try and use price promotions more often to try and achieve a lower price out there to get them.
They're pretty motivated to do that.

In relation to promotion, which is the third P, we describe the different types of promotions that are out there. We used and cite the FTC data, and there's some confidential data that's being provided to populate that section. There is information available on use of advertising in magazines and so forth, different sorts of avenues for promoting menthol cigarettes that we describe.

We also draw on some analyses of commercially available data in relation to advertising expenditures for magazines in the U.S. for menthol and non-menthol. Those data do seem to suggest a greater pattern of expenditure to promote menthol relative to non-menthol brands.

In relation to place, we look at the issue of where menthol cigarettes are sold, so predominantly, at the point of sale, the proportion of marketing expenditure is allocated to retail and price promotions. So there's a concentration, if you like, of marketing at the point of sale in retail outlets, and that's similar for non-menthol cigarettes as well.

In relation to packaging, we go into some of the literature, which has examined how branding and labeling influence consumers' expectations of what the products might be like, and also influences their sensory experience of the way in which they do actually experience the products when they consume it.

We draw on some tobacco industry documents in relation to packaging. And some of these studies that we described in the tobacco industry documents are studies that give smokers the same cigarettes to smoke, but they're branded differently or labeled differently. And we find that under those circumstances, people's experience of the cigarettes will vary according to how they're branded or labeled. And in the tobacco industry documents, there are some of those studies that have been conducted with menthol cigarettes, and the results seem very similar.

We tried to, I guess -- prior to going into the next question, which is really about what kind of health reassurance messages were used in menthol marketing, we talk a little bit first about the issue of explicit and implicit health messages, the difference between the two. And so explicit health messages are those that overtly make a health claim, and so that might be a cigarette to soothe the sore throat, we would describe as an explicit health claim; if you use this product, this will happen.

An implicit health claim might be a cigarette as fresh as a mountain stream, and that's a claim that's kind of more descriptive. It uses a lot of imagery. And by associating the product with something that's sort of fresh, and the great outdoors, and healthy, and natural, it kind of connotes healthiness. So it's a less direct way of making a link between a product and a health benefit.

We note that the use of these kinds of implicit messages serves to imbue the relationship between the product and the outcome with some degree of ambiguity. It's quite hard for consumers to challenge or discount that claim.

We talk about the early use of marketing messages that explicitly promoted menthol cigarettes to soothe a sore throat or clear a blocked nose, and they do fall into the category of explicit health claims. And we give lots of examples of those that are drawn from the industry documents and other kind of historical records.

We then move into describing some of the more implicit health claims, and some of the rich advertising industry imagery that has been used over time, lots of use of water and ice and springtime and those sorts of things as being implicit health claims.

We also contextualize some of this with some literature from the broader field, looking at how branding and labeling influence the sensory experience of using products other than smoking, so the use of branding and labeling in influencing consumers' perceptions and experiences of beverages and also foods.

So in this area, we've drawn on some of the
literature reviews from this field, which suggests that I think sensory experience is quite manipulatable, by branding and by labeling. Consumers don't like to think that their experience is going to be changed by these kind of things, but time and time again, there are studies that actually do find that sensory experience is quite manipulatable.

So some examples are, just in the food area, studies that show that you can change consumers' experience and appraisal and liking of foods by simply calling a product a succulent Italian seafood filet instead of a seafood filet. It's the same product, but if you actually use the more descriptive language at the cafeteria, the people who go ahead and buy that product will experience it and rate it as more succulent and a whole lot of other different adjectives. And they'll like it more.

Also, this applies to children, some interesting studies that have been done with McDonald's branding, looking at having young children taste hamburgers and whether or not they were labeled with the McDonald's label or not. And the hamburgers that were labeled with McDonald's were appraised as tasting better. So there's quite a depth of literature in this area, too, which we think really kind of feeds into the importance of branding and labeling on consumer sensory experience.

Moving on, in relation to the claims, medicinal claims, and health claims, and taste sensation, I have covered that a little bit already. We go into looking at what other messages were conveyed to potential consumers by marketing as well.

There are a couple of other areas that have been highlighted in branding. One of them is youthfulness and sociability. Some of the literature calls this the idea of highlighting silliness and fun and very young activities, a sense of great enjoyment; so some of the brands, especially Newport, have a hook around that kind of branding.

Also, another type of message that is being promoted is group identity and in-group belonging. And that's particularly the case for youth, I suppose, and in relation to African-Americans as well. And we cover quite a lot of literature in that area from industry documents and from some empirical studies as well. So just in relation to the youth area, some of the empirical studies show that in ads for menthol cigarettes, the models are perceived to be significantly younger than in ads for non-menthol cigarettes.

We then come onto a section which is related to who the target populations are for menthol marketing. And we cover the literature in that area in relation to youth, in relation to women, and in relation to African-Americans, and then for other race and ethnic groups. And that literature that we use in this section has quite a lot of evidence that comes from the tobacco industry documents, which are a rich source of information about what consumers think about the products that they use. There is also a number of empirical studies that we cite as well.

In relation to African-Americans, there is quite a large number of empirical studies for that area. In the African-American population subgroup, there are quite a lot of empirical studies in that area. So I think, brought together, some of this targeted marketing area in the literature that we cover, really I think does give good evidence for the notion that menthol marketing has been targeted at certain population subgroups.

I think looking at the overall area of tobacco marketing, which has been summarized extensively in Monograph 19, published a couple of years ago by the National Cancer Institute, targeted marketing is a basic strategy of marketing, identifying target groups, and then making sure that your marketing to is tailored to and reaches your target audiences is a fundamental aspect of marketing.

What's different about menthol marketing is that it has very much been targeted to African-Americans. That isn't so much the case with non-
Then, finally, we come to looking at consumer perceptions, consumer beliefs about harm and whether those beliefs are implicit or explicit. Again, there's a lot of information from the tobacco industry documents that we draw on, again, lots of information from consumers about why they use menthol cigarettes and how they make their way to smoking menthol cigarettes. And there are a number of different empirical studies as well, seven or eight I think we have here, that have been summarized. Overall, the tobacco industry document reviews and one of the more qualitative empirical studies are consistent in finding that consumers do have mistaken beliefs about the benefits of smoking menthol cigarettes. Those beliefs are generally not explicit. There are a couple of studies published recently that ask directly whether people think menthol cigarettes are less harmful or not, and those studies do not find that people have explicit beliefs that menthol is harmful. But underneath that, there does seem to be -- if you dig a bit deeper, there certainly does seem to be this enduring, persisting, implicit beliefs below the surface that menthol cigarettes do maybe confer some kind of health benefit, certainly in relation to being easier to use when you have a cold or a sore throat, but potentially just less harmful across the board. But, again, those beliefs are not quite difficult to identify unless you probe around and do some more qualitative research. And that's where some of that seems to come to light, in both the more open kind of methods that are used in qualitative research, open-ended question methods in qualitative research, and also in the more data questioning that goes on in consumer research.

DR. SAMET: Thank you, Melanie. As you can see, there's a great deal of material available that has been reviewed, and a fairly extensive draft, that as it moves through its next stage, we'll be able to post. Having heard a lot, are there questions or comments for Melanie? Tim?

DR. MCAFEE: Well, this is really fascinating, and thank you for your in-depth look at this. I guess the thing I'm curious about, and I assume we'll hear this when you get to the conclusions, is it's essentially kind of the same -- it's kind of the counterfactual equivalent in the marketing universe, if you think you will have been able to glean enough information from this review to answer, basically, the question that we ultimately asked, does the marketing of menthol cigarettes increase the prevalence smoking beyond the anticipated prevalence if such cigarettes were not available, and is there something kind of intrinsic to the nature of the way that menthol is being marketed specifically, that if menthol were not available as a product, there wouldn't just be substitute of phenomenon going on?

DR. WAKEFIELD: I don't think, at this point, I'm going to answer that specific overarching question, but I'll just make some observations I think. I think it's true to say that there is no one single image of a menthol smoker. I mean, consistent with branding, people smoke different menthol cigarettes, according to the brand image that they wish to reflect. There are some aspects of the product that flow through and deliver for them, that are consistent with the brand image. So there's no one kind of menthol smoker. Having said that, I am quite struck by the fact that you get category differences between menthol smokers and non-menthol smokers when you're looking at some of the other outcomes with Dorothy's section, and I think that's quite significant.

So I think the other thing to say is that we kind of look for biological plausibility in making a decision about causation. And I think it's important to look for plausibility in relation to how might marketing influence population behavior.
It's very much I think the fact that we have a context for what we know about tobacco marketing through the huge amount of work that was done for Monograph 19. So we know that there's causal evidence that tobacco marketing is related to increased uptake, high smoking prevalence in the population.

The question here is, what about menthol marketing? And I think in reflecting on the similarities and differences between menthol marketing and non-menthol marketing, in general, they're similar, but there are some differences. One of the differences is that there have been messages that have been transmitted about menthol cigarettes which have to do with the soothingness of the product, the refreshing nature of the product. So there's implicit kind of health-related messages, which follow through with the delivery of the sensation that one gets. And that's different, too, to non-menthol cigarettes.

DR. SAMET: Dan, do you have a question?

DR. HECK: I do have a question, but as you were speaking, I was noticing the implicit health claim on my water bottle here, which features a blue sky, and an elk, and some trees. My question is this. You did mention, earlier in your comments, that menthol cigarettes on average are more costly than non-menthol in your analysis or some analysis. Then you also mentioned that price promotion is more aggressive in the menthol segment.

Do you or will the report chapter have a perspective on -- do those effects neutralize each other, so in effect, the price is about the same?

DR. WAKEFIELD: It's hard to tell. We didn't get that answer when we asked in the July meeting.

DR. SAMET: Although I will note, Dan, that my Diet Coke bottle says "The Heart Truth" on it. Jack?

DR. HENNINGFIELD: Two things. One is that the factors that we're looking at include African-American and minority targeting, and that seems to be a pretty strong conclusion. The other thing, on the health claims, or the implicit health claims, I wonder if you can tie that into the Monitoring the Future survey data. And one of the most persistent findings, in roughly four decades, of Monitoring the Future's survey data is the inverse relationship between drug use and health concerns, across every drug category. And it's remarkable. We've got four decades of data, whether it's opioids, prescription drugs. When fears go down, drug use tends to come up. Marijuana use is tending to come up right now. When fears go up, drug use goes down.

It's amazing, and it would be interesting to maybe take a look at that, those data, and maybe pull it in, because it's a huge body of data, that what you're saying, the extent to which there is a perception that menthol is reducing concerns, that fits into a very large body of data. If you need help looking at those data, I'd be happy to help.

DR. SAMET: Were there other comments, questions?

DR. CLANTON: Jon, this is Mark.

DR. SAMET: Yes, Mark?

DR. CLANTON: Melanie, I realize that you and Dorothy looked through just an enormous vast quantity of papers in order to write chapter 5, but I want to ask another counterfactual question. And I realize you may not be able to answer it, but I do want to ask it.

In a counterfactual world where menthol never existed, is there anything in the marketing data that would imply that marketing non-menthol cigarettes, in a counterfactual world, to African-Americans would somehow be different than marketing menthol cigarettes in the current world to African-Americans?

Is there anything you're able to glean that might help us understand how there might be fundamental differences in marketing tobacco in general to African-Americans versus the way menthol cigarettes are currently marketed to that group?

DR. WAKEFIELD: Good question. I think I might take that on notice.

DR. CLANTON: Thank you.
DR. SAMET: I am going to suggest, Dorothy, that we go to your chapter, your component of chapter 5, I think what will become a separate chapter given the length of the two contributions. And you've talked about this before, so I think there's really not more to an updating — thinking about this component and where it can go. And I think everyone has seen that there's a lengthy piece on marketing and then also a lengthy piece on another very important part of the story that we probably intend to separate.

Chapter 5 – Dorothy Hatsukami

DR. HATSUKAMI: So this part of the chapter, which will now be a new chapter, is on initiation, dependence, and cessation. And in the last presentation, I gave or identified the number of articles for each of the questions that we were trying to address. Since that time, we have added some new articles, and added information from the presentations that we had at the last meeting.

What I'd like to do today is just provide a preliminary evidence synthesis. So I just wanted to stress that these are just preliminary at this point in time and they are perhaps potentially bound to be modified.

So in the area of initiation, this is the evidence synthesis. We believe that the evidence is sufficient to conclude that a higher prevalence of menthol cigarette use is observed among a younger population of smokers compared to an older population, with the exception of African-Americans, where you observe high rates among both the younger population, or the youth, and adults.

Additionally, within a population of youth, a higher rate of menthol cigarette use is observed among the younger, compared to the older population of youth. We believe that the evidence is sufficient to conclude that there is an increasing trend towards a higher rate of menthol cigarette smoking among adolescent cigarette smokers, complemented with a decreasing trend of non-menthol cigarette smoking, even among adolescents who smoke less than 100 cigarettes per day -- oh, I'm sorry; less than 100 cigarettes in a lifetime. That would be an excessive amount of cigarettes, to be sure.

Although the prevalence of smoking is declining, the rate of decline for prevalence of menthol cigarette smoking is less than the rate of decline in the prevalence of non-menthol cigarette smoking. There's evidence to suggest that less established smokers are more likely to smoke menthol cigarettes than more established smokers when examining the duration of use.

Although most studies showed that the age initiation was similar between menthol and non-menthol smokers, the one Adolescent -- there was only one -- Adolescent National Survey showed menthol smokers experienced an earlier age of initiation. This finding was observed even when controlling for age, race, and gender.

The evidence is sufficient to conclude, based on the concordant findings of several internal tobacco industry documents studies, that tobacco companies were aware of the appeal of menthol cigarettes to younger inexperienced smokers, or initiates, because these cigarettes are easier to smoke. And chapter 3 indicates biological plausibility of increased appeal of menthol cigarettes because of their physiological effects.

So that's on initiation. In the area of addiction, in terms of looking at the likelihood of becoming addicted, that particular question, to date, only one unpublished secondary analysis has addressed this issue. In a sample of adolescent students who were assessed across different regions in the U.S., this evidence indicates that menthol cigarettes are associated with increased transition to greater or established smoking, and possibly dependence.

With regards to whether menthol cigarettes increases degree of addiction to smokers, or to the smoker, among adults, there is little evidence to support the conclusion that menthol cigarettes increase addiction to smoking, based on the mixed results on differences between menthol and non-menthol for pharmacokinetics of nicotine, cigarettes per day, exposure to nicotine in general...
and per cigarette, although little is known -- and this is something that Dr. Benowitz had talked about -- about the differences in those who smoke less than 10 cigarettes per day, or those who are in the early stages of smoking acquisition and subjective measures of dependence.

However, among youth, there is sufficient evidence to indicate that those who smoke menthol tend to be more dependent than those who smoke non-menthol cigarettes, as reflected by the amount of cigarettes smoked and dependence in several dependence measures. Thus, this population seems to be particularly vulnerable to the effects of menthol in smoking.

In terms of the area of cessation, there is sufficient evidence, based on national surveys and clinical studies, to show that non-white smokers of menthol cigarettes compared to non-menthol cigarette smokers experience more difficulty with cessation. The population that seems to be particularly vulnerable is the African-American population. The results also show that menthol cigarette smoking may lead to less responsiveness to medication. This is an area that requires further exploration. Unfortunately, there are no studies that have been conducted among adolescent smokers.

Then, finally, menthol cigarettes are marketed towards and smoked more by a population of smokers that are at the highest risk for poor cessation outcomes. They include the African-Americans and the young.

So that's basically where we are at this point in time.

Let's see. Mark, are you on?

DR. CLANTON: I am on.

DR. SAMET: Yes. Do you have any comments or questions? I just didn't want to forget you.

DR. CLANTON: I have no comments or questions.

DR. SAMET: Anyone else?

[No response.]

DR. SAMET: Open Public Hearing

DR. SAMET: Then what we'll do is we will move to the public comment period, and then we'll return, and I will just give a quick update on the final chapter, which I guess will become chapter 8 now and talk about that, and then we'll hear from Dan. But first we'll move to the open public hearing.

Let me give the remarks for that.
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<th>Page 135</th>
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| 1 Both the Food and Drug Administration, the FDA, and the public believe in a transparent process for information gathering and decision making. To ensure such transparency at the open public hearing session of the advisory committee meeting, FDA believes it is important to understand the context of an individual’s presentation. 
2 For this reason, FDA encourages you, the public hearing speaker, to begin your statement, written or oral, by revealing any financial relationship you may have with a sponsor, its product, and, if known, its direct competitors. 
3 For example, this financial information may include the sponsor’s payment of your travel, lodging, or other expenses in connection with your attendance at the meeting. Likewise, FDA encourages you, the speaker, to advise the committee if you do not have any such financial relationships. 
4 If you choose not to address this issue of financial relationships at the beginning of your statement, it will not preclude you from speaking. The FDA and this committee place great importance in the open public hearing process. The insights and comments provided can help the agency and this committee in their consideration of the issues before them. 
5 That said, in many instances and for many topics, there will be a variety of opinions. One of our goals today is for this open public hearing to be conducted in a fair and open way, where every participant is listened to carefully and treated with dignity, courtesy, and respect. Therefore, please speak only when recognized by the chair. 
6 Thank you for your cooperation. 
7 Then, a reminder to the speakers, you have eight minutes for your presentations. And I think, if I see how things are set, you will get a warning at two minutes, probably an orange light. 
8 So let’s begin with our first speaker, David Levy from the Pacific Institute for Research and Evaluation, and I guess Legacy. David? 
9 DR. LEVY: Thank you for the opportunity to present here. Support has been provided to me by the American Legacy Foundation, and that’s specifically to model the effect of a menthol ban. 
10 In addition, in my general modeling efforts, I have been funded through the National Cancer Institute. What I specifically do through my modeling efforts is model the effect of a specific policy, that is, a ban on menthol cigarettes, and look at the effects of that ban on smoking prevalence and smoking-attributable deaths. I’m using a model that has been validated and used quite extensively. We’ve developed models for about 35 countries now and validated for quite a few of those, as well as for quite a few number of states. 
11 The results I’m going to be presenting today are forthcoming in the American Journal of Public Health, and that article has been made available to the committee, although it is embargoed. And I’m using the standard structure that I’ve used in my past work. And it’s, in structure, very similar to the model that was presented earlier by David Mendez; that is, it’s a dynamic model, one that looks at effects over time, and the population moves through times, aging through and allowing for births and deaths. Then overlaid on that's a smoking model, which distinguishes never, current, and former smokers, and allows for quitting and relapse. 
12 What this model does as specific to menthol is distinguishes, both in current and former smokers, menthol and non-menthol use, as well as a group called no usual preference. And this is based on the 2003 CPS-TUS data, which, to my knowledge, is the largest dataset, and for the year 2003, provides extensive information on menthol versus non-menthol cigarettes. 
13 I use standard kinds of methods in developing estimates of smoking-attributable deaths. And another thing my model does is, through the period 2003 to 2010, allows for the effects of policies, and then from 2010 onwards, assumes policies, other than the menthol ban, stay constant at their 2010 level. 
14 This model involves the quitting process... | 1 present here. Support has been provided to me by... 2 the American Legacy Foundation, and that's... 3 specifically to model the effect of a menthol ban. 4 In addition, in my general modeling efforts, I have... 5 been funded through the National Cancer Institute. 6 What I specifically do through my modeling... 7 efforts is model the effect of a specific policy,... 8 that is, a ban on menthol cigarettes, and look at... 9 the effects of that ban on smoking prevalence and... 10 smoking-attributable deaths. I'm using a model... 11 that has been validated and used quite extensively. 12 We've developed models for about 35 countries now... 13 and validated for quite a few of those, as well as... 14 for quite a few number of states. 15 The results I'm going to be presenting today... 16 are forthcoming in the American Journal of Public... 17 Health, and that article has been made available to... 18 the committee, although it is embargoed. And I'm... 19 using the standard structure that I've used in my... 20 past work. And it's, in structure, very similar to... 21 the model that was presented earlier by David... 22 Mendez; that is, it's a dynamic model, one that... |
quite extensively, allowing for when an individual quits, the potential for relapse, and how that tendency to relapse varies with the number of years since the smoker has quit. So you have people running through smoking, quitting, going back to smoking, and so on.

What I do is I look at a menthol ban with a very specific structure, which I'll describe in a minute. But we start the ban in 2011, and we look and we assume that the ban stays in effect. In the model, there are several important assumptions that are made. We look at smoking initiation through age 24. After age 24, we allow for cessation and relapse. We also look at the effects of policies through 2010. And another important assumption that we make is that the relative mortality risks are the same for menthol and non-menthol smokers. We also assume that the mortality risks are the same for African-Americans and others, and we do have a separate model for African-Americans.

Now, in developing the specific scenarios which we examine, we did a fairly extensive review of the literature, but there are several important pieces of evidence that we use. One is a study that I did with John Tauras, Frank Chaloupka, and others, which looks at switching in reaction to price and other policy changes between menthol and non-menthol. And in that, we found that menthol smokers are less likely to switch than non-menthol smokers. Another study that was done looked at cessation rates and found that cessation is lower among menthol than non-menthol. And as described earlier, there is also evidence on initiation. I'm running a bit short on time. The other bit of evidence you've seen here is the evidence regarding what menthol smokers say they'll do in light of a ban, suggesting that a large number of them would quit.

We look at three different scenarios. They're at 10, at 20, and at --

DR. SAMET: I'm just going to suggest, why don't you move to your results quickly so we can see them?

DR. LEVY: Okay. One of the things we look at what would happen in the absence of a ban -- and we do find that the percentage of menthol would increase slowly over time. Now, in terms of the ban itself, we see that the way we model it, there's a fairly immediate effect of the ban, as we find with most policies. And you see the three scenarios, the 10-percent, 20-percent, and 30-percent reduction, which maintains itself over time.

Now, when we did the modeling for African-Americans, we find larger effects because of the fact that a much larger percentage of African-Americans smoke menthol than non-menthol cigarettes. And, finally, and I think most importantly, is the number of lives saved. And what we find is with a 10-percent reduction -- that is, 10 percent of those who smoke menthol quit in the face of a ban -- we find that by the year 2050, over 300,000 lives are saved. With a 20-percent change, we find almost 500,000 lives changed. And with 30 percent, we find over 600,000 lives are saved.

DR. SAMET: David, if you could just wrap up, say, in the next 30 seconds.

DR. LEVY: I guess the other important point I'd like to make is that disproportionately, African-Americans are affected, and you see that nearly a third of the lives saved are among African-Americans, even though they're a much smaller percent of the population. Thank you.

DR. SAMET: Thank you. And we do have the publication to read, and this provides I guess a counterpart to the modeling that the other David, Mendez is carrying out. Addressing another I think perhaps can raise the ban question as another scenario to consider.

So are there clarifying questions for David around this work? Yes, Cathy?

DR. BACKINGER: Just a quick clarifying question. You talked about cessation and relapse. How did you calculate that for menthol smokers? Was it the same for menthol and non-menthol or was there a difference, for cessation and relapse over
DR. LEVY: As I mentioned, we had done a separate study of cessation rates. And we used the cessation rates, actual cessation rates in 2003, which were very similar to those found in 2006, of menthol smokers versus non-menthol smokers. We also distinguished by age and by gender, so we used very finely-tuned measures based on this previous study that we had done.

DR. SAMET: Dan?

DR. HECK: Just a quick question, perhaps to FDA. Was this manuscript provided to the FDA or to the committee, provided to the industry representatives, members of the subcommittee, or the committee?

MS. COHEN: It's in your packet.

DR. HECK: Okay. Thank you.

DR. CLANTON: No. That was very interesting, and I'll look forward to reviewing the publication, period.

DR. SAMET: Okay. Good.

Thank you, David.

DR. LEVY: Thank you.

DR. SAMET: Thank you, David. Our next presenter is Jane Lewis from Altria Client Services.

DR. LEWIS: Good afternoon. I am Dr. Jane Lewis. I am the senior vice-president of the Tobacco Regulatory and Health Sciences Group at Altria Client Services, and I'm speaking today on behalf of Phillip Morris USA. And I appreciate the opportunity to make comments to the committee.

The Family Smoking Prevention and Tobacco Control Act established menthol as one of FDA's and this committee's first regulatory considerations. Specifically, the committee was tasked with developing for FDA a report and recommendation on the impact of the use of menthol in cigarettes on public health. This committee has attempted, over the course of the last 12 months, to establish and implement a framework to review and assess the relevant science and other factors that must be considered in developing its recommendation.

We appreciate and acknowledge the complexities of tobacco science, but the question at hand is straightforward. Are menthol cigarettes more harmful than non-menthol cigarettes? We continue to believe, given the extent of the available scientific information, that the answer to this question is no. We remain committed to providing the FDA information that supports its stated goal of a science- and evidence-based decision-making process.

Specific to menthol, we have provided numerous scientific and other related documents to support the process, including two written submissions in March and June of 2010, which provided a detailed analysis of the then-available science; presentations delivered to this advisory committee in July of 2010 to address requested topic areas such as biomarkers.

In August of 2010, we responded to the agency's document collection request on menthol. We provided over 3,600 internal documents responsive to the request, as well as other menthol-related information. In August of 2010, we also voluntarily provided the agency the underlying data from our total exposure study. Lastly, in December of 2010, we provided the agency an in-depth analysis of the potential of countervailing effects of a ban on menthol cigarettes.

As we have previously conveyed to the agency in these submissions and presentations, our analysis of the relevant science in comparing menthol to non-menthol cigarettes leads us to the following evidence-based conclusions.

In non-clinical testing, menthol cigarettes do not result in increased toxicity compared to non-menthol cigarettes. In clinical testing, smoking menthol cigarettes as compared to non-menthol cigarettes, produces no consistent effect on human puffing and inhalation behavior. Further, the most robust studies show there is no effect on biomarkers that estimate average daily exposure or biomarkers of potential harm.

Overall, the weight of the scientific evidence indicates that menthol does not change the inherent health risk of cigarette smoking. For
disease risk, evidence from epidemiological studies suggests no effects of menthol. As it relates to the impact of menthol on smoking initiation, the research is limited. Initiation is a complex issue where future research may be needed. For example, there might be an opportunity to incorporate additional questions into future national government surveys. Nonetheless, the limited available evidence suggests there is no unique effect. Menthol does not increase dependence, based on widely-accepted measurement methods. And, finally, cessation outcomes do not support a conclusion that there is an effect due to menthol. During the course of the last 12 months, the body of science related to menthol has continued to grow. In order to fully integrate the recent science with what we had previously provided to the agency, Phillip Morris USA intends to submit its own perspective on menthol to the agency by March 23rd, 2011.

In sum, there is no science- or evidence-based reason that would support a TPSAC recommendation to ban menthol cigarettes, or otherwise impose additional restrictions. It is also important to remember, however, that the Act requires the agency to consider other factors in addition to the science, including the countervailing effects of any potential regulatory action such as a ban on menthol cigarettes.

As we outlined in our December 2010 submission, a ban on menthol cigarettes is certain to trigger a series of lasting and severe unintended consequences and other countervailing effects that would be detrimental to public health and society. Further, during the February 10 TPSAC meeting, one of our company experts provided additional information regarding anticipated outcomes in the illicit cigarette trade that would likely result from a ban. Neither the TPSAC nor the agency should discount the seriousness of these potential countervailing effects.

We encourage you to fully review and weigh the unintended consequences of any menthol-specific regulatory action as you undertake your deliberations of menthol. From the perspective of an impact on public health, is it clear that the available science, in conjunction with potential unintended consequences, does not support a ban of menthol cigarettes.

Many aspects of the Act, which the agency has already begun to implement, are intended to address, among other things, youth initiation and use of tobacco. The agency has indicated that they believe these actions will discourage non-users, including kids, from trying cigarettes, and without the countervailing effects of a ban. Actions such as these should be given sufficient time to be fully implemented. Thank you, and I'd be glad to answer any questions you have.

DR. SAMET: Thank you. And, actually, you reminded me that it's now been almost a year.

Let's see. Questions or comments? Mark, again, not to forget you.

DR. CLANTON: Thank you for not forgetting,

but no questions here.

DR. SAMET: Thank you for your presentation.

Our next presenter is Jim Tozzi from the Center for Regulatory Effectiveness.

MR. TOZZI: Good afternoon, members of the committee, Mr. Chairman. I'm Jim Tozzi. I'm with the Center for Regulatory Effectiveness. As you've heard many times, we're regulatory watchdogs. We get grants from all industries, including the tobacco industry, and we look at agencies to see if they comply with the good government statutes, which translates into how regulators are regulated. What I want to do in the few minutes that's given to me is summarize what we think the work of this committee has been to date. I'm particularly interested in the public participating in this, and we have a number of websites that the public looks at. And for the first time, we're going to actually put these remarks on our website today and solicit public comment. And you'll be able to see all those that either agree or disagree with my comments.
Now, who in particular in the public are we interested in addressing this? First, the parents of youth who are going to purchase counterfeit cigarettes, which have been proven to have toxic effects in an order of magnitude greater than legal cigarettes, should be more active in this proceeding.

African-Americans should also care. They're going to be forced to commit crimes by buying illegal cigarettes. Third, the non-smoking public should also care. Why? Because they're going to fuel terrorist activities through the purchase of illegal cigarettes, which will also be subject to increasing violent actions by drug cartels in the United States.

In our view, three issues dominate this proceeding. One, do menthol cigarettes increase mortality morbidity relative to legal cigarettes? Two, do menthol in cigarettes make it easier to start smoking or more difficult to stop? And third, what's the effect on the black market?

With respect to morbidity and mortality, TPSAC has been presented with a wide range of studies, the hard science dealing with these two topics. The overwhelming weight of the evidence suggests there is no increase in morbidity or mortality, relative to non-menthol effects, and kudos to the committee for stating this, at least in my opinion, in your draft report.

On initiation/cessation, the data on that, the soft science, is mixed, although we think it's tending towards no effect. The problem with these studies, as you all know, is that the underlying studies were not focused on initiation/cessation, and they were the subject of subsequent reviews, which were trying to fit a new study design into old study objectives.

CRE examined a number of the studies that you're relying on, not all of them. We think we've demonstrated, and it's subject to public comment, that a number of them, not all of them, were not compliant with the Data Quality Act, which means by federal statute, the agency can't use them. We filed a petition with the agency on these, and under the act they will have to respond sometime, and I know they're pretty busy people, so that may be a while.

On initiation/cessation, if you look at all the data, we call your attention to two extremely powerful statistical studies that we would like to quote. And both of them -- I didn't think I made that good of a point, but thank you -- the two that we would like to comment on, which we think have particular statistical power, and they've been quoted accurately -- one of the parts I think Dr. Benowitz stated -- Dr. Hyland of Roswell Park and Dr. Muscat, under contract for the Public Health Service, concluded these data indicate that mentholated cigarettes do not exhibit greater signs of nicotine dependence as measured by the likelihood of future cessation, time to first cigarette in the morning, or the number of cigarettes smoked per day. That was a 20,000-sample study and that was subject to those results.

Dr. Muscat concluded cigarette mentholation was not associated with continued smoking. The findings suggest that menthol does not increase the addictive properties of tobacco and nicotine. So, based on that, I think this is mixed at best, tending towards no effect.

Finally, on contraband, the expert on contraband, your fellow or sister, whatever way you would use it, federal agency is ATF. And it's difficult for me to understand why this committee is not addressing that issue. Maybe I'll learn after one of you leave, and I can watch when you write memoirs in a journal, and I'll find out.

But we're not leaving it up to that. We wrote to the general counsel of your agency and asked them, does the fact that the statute says study the public health effects of contraband mean that? We think it does. And it'll be interesting if the general counsel answers our letter, subsequent to the issuance of your report and what that person's answer will be.

But this is what ATF said about contraband. Cigarette smuggling profits fund terrorism and other deadly groups, criminal groups. Counterfeit
cigarettes pose health standards over and above those of genuine cigarettes. Illegal cigarette trafficking makes it easier for children to smoke. In particular, they went on to say the traffic of contraband cigarettes is a worldwide problem. Billions of dollars of tax revenue are lost by all levels of government throughout the world. Much of the illicit profit is gained by organized crime and terrorist groups. Then they go onto say that trafficking and counterfeiting contraband products poses a serious health risk – and that's your bag, right -- to society. There are no standards for production of counterfeit tobacco. This allows things for biological and chemical contaminations.

So what I'm saying, that is not CRE's statement. That is a statement in the federal register, a determination of fact that was presented by a federal agency. So I beg of you to look at what your fellow agencies are saying about this issue. It's not an issue that I made up; it's that they're saying the public health effects of contraband is a big issue.

So where does this all lead me? There has been a storm of data on this proceeding, and if you look through this big storm, I see one tree standing. That tree has a sign coming down, "Too early; cannot base on science to ban menthol."

Thank you.

DR. SAMET: Thank you. Thank you for being there.

Okay. Thank you. And I think our final speaker is Niger Innis from the Congress of Racial Equality.

MR. INNIS: Thank you, Mr. Chairman. Thank you to the committee. I'm Niger Innis, the national spokesman for the Congress of Racial Equality, one of our country's oldest human rights and civil rights organizations. CORE has no financial relationship with tobacco interests, pro-tobacco interests, anti-tobacco interests, none of the above. My accountant would say unfortunately.

For the last several weeks, the world has been captivated by the revolution occurring throughout the Middle East and northern Africa. From Tunisia to Yemen, from Iran to Libya, diverse people from varying countries are fighting for liberty, fighting against their governments for treating them like children that need a paternalistic government to control their lives because, somehow, the divine hand of government knows what's best for them. It's interesting that in the waning days of Mubarak's regime in Egypt, he actually referred to the revolting masses as his children.

How ironic that we are here today, in the freest country on earth, 5,000 miles away, discussing the criminalization of a particular type of legal product that has been partaken in by millions of Americans every day, including the Speaker of the House, who happens to be a Republican, and the President of the United States, that happens to be a Democrat.

I should say I have never, nor will I ever smoke a menthol or non-menthol cigarette. And I personally think that it is a nasty habit and it's caused me to lose a couple of relationships. But I think it's exponentially more offensive to my sensibilities as a free man to suggest that we ought to criminalize a particular type of legal product because a particular community tends to like it.

Your study is highly significant and...
symbolic for the African-American community for the
simple reason that menthol cigarettes are, indeed,
popular with blacks. It's no secret that menthol
cigarettes provide a taste and flavor that is
preferred by many African-Americans. Some even
call it, in my community, the black man's
cigarette. But is that reason enough to ban
menthol? Of course not. Because if that was the
case, I suggest that TPSAC should just consider and
recommend that all black people just be banned from
smoking, period. Now, this is silly, and we know
it's silly because it would clearly be
discriminatory, even if well intended.

If the government is not going to ban all
cigarettes, then the obvious question is, why
should it selectively ban those cigarettes that
African-Americans tend to prefer? To do so would
be benign paternalism.

In contrast to the absence of hard
scientific evidence against menthol being any more
addictive than non-menthol cigarettes, there are
significant indications that a ban on menthol would
boomerang and create a bad situation in our
community.

It is CORE's hope that the advisory panel
will fulfill its requirement of considering the
unintended consequences of a ban on menthol
cigarettes. Any recommendation must be grounded in
a real-world understanding of the devastating
impact that illegal counterfeiting, smuggling,
distribution, and consumption of cigarettes has on
our lives and on our streets.

Just last weekend, I had a conversation at
my barbershop with a black woman and a white woman
who both, actually, smoked menthol cigarettes. I
told them I was coming down here to provide
testimony because there's a move afoot to ban
menthol cigarettes. And they told me this, and
this is a quote from them. "If that happens, I
will sell the cigarettes right here at triple the
price and make a fortune in this community." And
the other hairstylist responded, "I'll be your
first customer."

If smokers were a captive population and
tobacco products a captive industry, you might be
able to make a case that banning menthol could
work. But because there would be a strong demand
fed by many alternative sources of cigarettes,
banning menthol would be a self-defeating and
indeed a very harmful step for my community. It
would drive more smokers to the unlicensed
unregulated side of the street, and more troubling,
it would give underage access to kids, making it
easy for them to smoke unregulated cigarettes. And
we have to ask ourselves, is that really what we
want to do?

If menthol is banned, history shows that a
large underground market would be created, and many
questions should follow. They involve questions of
how effective contraband tobacco enforcement has
been to date and the costs of additional law
enforcement. These are all questions that the
committee should have asked already and should have
addressed, but it has not, to the best of my
knowledge at this point, and I suspect will not.

I follow your deliberations with great
interest, and your committee -- at this point I
fear the report has already been written, yet it
appears to me that so far you have not studied
these critical issues to the degree necessary and
to the extent that the United States Congress
requires.

Despite persistent concerns expressed months
ago by CORE, the National Black Chamber of
Commerce, various African-American law enforcement
groups, and others, it's alarming that TPSAC has
not sought out the advice of independent experts
who can testify about illicit tobacco markets,
worldwide trade and contraband cigarettes, how
blacks are affected by contraband markets, or the
toxic ingredients, like mercury, often found in
unregulated cigarettes.

CORE hopes that TPSAC did not put on
blinders months ago to reach a preconceived
decision and to pursue a pasha-like paternalistic
goal and agenda. CORE is urging the FDA, in the
strongest terms, not to jump to preconceived
conclusions that menthol cigarettes should be
banned simply because they are popular with blacks. Government's efforts to demonize menthol-flavored cigarettes will simply add yet another government-imposed prohibition on a legal activity, and, hence, another government restriction on the people's ability to exercise their liberty, and this being done in the freest, or what is currently the freest country on earth.

The role of government should be to educate citizens by providing accurate information. I support rigorous and early education about the dangers of smoking in our schools. CORE would support maximizing the social media revolution to directly alert children and parents about the dangers and hazards of smoking menthol and non-menthol cigarettes. I would urge all cigarette companies, menthol and non-menthol alike, to contribute or expand their contribution to said efforts to educate the public. These are things that government should and can do.

Governments should not attempt to control the lives of adults and tell them what they can and cannot do, whether it involves alcohol, fast food, sweets, or in this case, cigarettes. That's what freedom and liberty are ultimately about. If in the convenience in our American luxury, we've forgotten what liberty is, all we have to do tonight is turn on CNN and watch people who are dying for it. Thank you.

DR. SAMET: Thank you. Because this is a public meeting, I just feel like I need to make several clarifications about TPSAC's role. And first, sitting here on March 2nd, I wish that our report were done and ready for March 23rd, but I can assure you, we face a very busy three weeks ahead, and we are sitting here, gaining further input into our report because we are still in progress.

If you were to look carefully at the Act, you will find that TPSAC's charge with regard to the report does not mention a ban; it mentions public health impact and other information that is to be provided to FDA as guidance. Any policy actions that might follow lie with the FDA and not TPSAC.

So I want to be very explicit about what our role is. We are fully cognizant of the provisions that suggest that, included within our scope of activity is assessment of countervailing effects, one of which could be contraband and of consequences. We will comment on that. We would not be, I think if a ban were undertaken or some other measure of restricted access to menthol-containing cigarettes, the sole source of guidance or expertise that FDA might turn to. And I think under the Act, in fact, the charge is to the Secretary to consider such measures.

So I want to be very specific, because I appreciate what you are saying, and I also want to define what is within the boundaries of the charge given to us for the report to be submitted on March 23rd, and what might lie more broadly within the purview of FDA.

So let me ask, are there other questions or comments for this presentation?

[No response.]
I will say that there will be a concluding chapter, chapter 8, and I think at this point, there's been enough discussion of that chapter to have a general sense of what goes into it. And, clearly, part of our task over the next three weeks is to bring that chapter to a close.

If you will, think back to chapter 1, which describes, essentially, the charge to us, and in chapter 2, how we're going to go about doing our business. There seven questions related to individual smokers and two related to population-level consequences of the availability of menthol cigarettes. We intend to provide answers to those questions that will be put in the conclusory language that we have described in the report, which, you remember, is based around this idea of equipoise.

The support for whatever our answers may be will be drawn from the prior chapters that set out the evidence, and that will be chapters 4, 5, 6, and 7, I think, in the renumbered version. And we will refer specifically and directly to the key information that will lead decision making in one direction or another. We intend I think to provide some overall conclusions and recommendations, as we have been asked to do in the Act. And then also, it is here that we will consider these so-called countervailing consequences, including the question of contraband.

This is TPSAC's look at the contraband issue, and we recognize that there are others who may choose to be looking at this in the future. We have heard from certainly a number of experts and various groups, offering their opinion about the potential for contraband, and we are looking at that information carefully.

We may also have some recommendations for areas where further data-gathering or further research might be of benefit for decision making. We don't see our task as setting out an academic research agenda on menthol in cigarettes. There are indeed many scientific questions that could be explored, and many intriguing ideas have been voiced around this table over the last year. But if we see key items that might be important to answer questions that FDA might need answered, we will put those there.

So this is just sort of a broad overview of the working outline of chapter 7, and I'm certain we will get at least a preliminary draft made available before our next meeting. So I don't know whether there are questions or comments on my somewhat cursory overview, but I think that's sort of what we can do right now.

So let me ask. Tim?

DR. MCAFEE: I guess this is sort of a procedural question. I'm becoming a little anxious, realizing how close we are getting to the due date. It's essentially what you see happening between now and the end, particularly around these remaining chapters for which we've heard summaries of but haven't seen drafts, and some of which are still in play.

Do you have thoughts about how you may communicate with the committee, et cetera, between now and when we meet? I'm just worried about being exposed to a chapter five minutes before we have to say, yes, this looks good.

DR. SAMET: I am looking to Caryn to see whether she wants me to answer that. So if you're becoming anxious about the time --

[Laughter.]

DR. SAMET: -- you don't have any sympathy.

I think the answer to the question is, obviously, we're going to post these as soon as we feel they are ready. I mean, there's an awful lot of work that's been done. These are lengthy documents with extensive referencing and tables. For one, we want to have them in good shape when they are posted. We want to make certain that we've eliminated errors. We're working on that.

I would think that chapter 4 is coming relatively close to being finished. That's a more descriptive chapter, and would likely be, I think, available rather soon I think. And Karen and Patricia are nodding their heads yes.

Now, the chapters 5a and 5b or 6 and 7,
there's a lot of writing, still things to pull
together, and I'm going to suggest that probably
they might become available, possibly around
roughly the mid-point between now and our next
meeting or somewhere around 10 days from now,
perhaps. They're not a quick read. So we'll try
and get them out there so that everyone has an
opportunity to review them with sufficient time.
I actually do see that the final concluding
chapter -- and actually I want to come back because
I did miss one thing when I presented it to
you -- will be a little bit more of a just-in-time
product. We will also -- in terms of the question
of public health impact, I think our conclusions
will be both qualitative and perhaps quasi-
quantitative, drawing on the modeling work done by
David Mendez. We'll take a close look at the
modeling work that David Levy presented, for its
utility for making some of these same kind of
judgments about the approximate magnitude of any
public health burden that might be associated with
menthol cigarettes. So that will be in chapter 7
as well.
So Tim, any other questions about this?
DR. MCAFEE: Would it be helpful to the
process if we had a feedback mechanism, other than
bringing our points up, or would you rather not?
We'll do it in the public setting once you arrive,
which is fine. I just want to confer.
DR. SAMET: Yes. I think that's what we
will be doing.
Yes, Cathy?
DR. BACKINGER: Also, a question of
clarification, because the Act talks about a report
and recommendation. And I certainly understand and
appreciate the distinction that it's a report to
FDA, and FDA then makes a decision about how to
move forward. But will there be recommendations in
the report?
DR. SAMET: We've been asked to make
recommendations, so there will be --
DR. BACKINGER: I've seen it. We've had the
conclusions or the synthesis statements in the
chapters we've seen to date.
The report will lay out its process of being both inclusive and incorporating rigorous scientific procedures and evaluating the best available data on the topics at hand. The FDA, of course, is held to a similar process, to consider all available and verifiable data impacting the question at hand. And the evaluation of the data will follow objective standards and will not discount studies funded by the industry, if those are otherwise scientifically sound and rigorous, because, in fact, an example, the total exposure study, I think some of those best and biggest studies have been funded by industry interests.

Chapter 2 is, I think, analogous to chapter 4 of the voting members' report, summarizing the demographic data of smokers of menthol cigarettes. We'll give attention to the statutory charge to address impacts on adolescents and minority populations.

Chapter 3 of the industry perspectives report is I think analogous to the major chapter 6, that we've seen the draft of. We'll have the review of the scientific evidence relating to the major biomedical disciplines; epidemiology, biomarkers, smoking topography, toxicity, and smoke chemistry. I think we haven't heard a lot about smoke chemistry in regard to the voting members' report.

Frankly, there isn't as much on that topic as we'd like, but what we do have available will be included and reviewed there. The chapter will also assess disease risk in subgroups, such as by sex or minority populations, where the research data do allow you to do that.

Chapter 4 will be a review of the scientific evidence on smoking initiation with regard to menthol, and that evaluation will include both the scientific literature available, as well as the national survey data that we've discussed.

Chapter 5 will be an appraisal of the effect of menthol, or potential effect, on cessation and dependence. As you know, these topics are kind of intertwined. Our original perspective was to have these as separate chapters, but they're kind of coming together. So I kind of think that that will be a freestanding chapter, appropriately melding the data available on those topics, including the national survey study data.

Chapter 6 will talk about several of the hypotheses that we've seen speculated, or offered, or discussed here at the TPSAC table. Some of these may well be woven into other chapters. They would include things like whether smokers perceive menthol to be less harmful, whether a person experimenting with smoking would find menthol cigarettes less harsh or more easy to smoke. And this chapter will also address some industry marketing practices or at least some of the anecdotal discussion of those that we've heard at the table.

Chapter 7 will address the unintended consequences or countervailing effects, a topic we've heard about from the public speakers and that has been commented upon in written form by the industry stakeholders. I think the essence of these comments on the countervailing effects required in Section 907(b)(2) is found in the written comments submitted to date, and some of the spoken comments. So I think that chapter will be kind of a synopsis of that topic.

Chapter 8 will be the industry's conclusions regarding menthol cigarettes. And, by the way,
1. each of these chapters I've itemized will have chapter conclusions and an appropriate little summary up front, an executive summary of sorts. And this final chapter 8 will synthesize those individual topical conclusions, based on their degree of certainty with which we can scientifically reach those, and maybe try to identify any areas that require any further work, maybe to flesh out a scientifically defensible advisory opinion to FDA.

So that's a very quick summary of the report. Again, our intention was to have this process farther along by now, but it is, indeed, a monumental task. I don't think the industry's perspective report is going to greatly exceed, in length, the voting members' report as such that we can project that now. I think it may be slightly longer, but not truly encyclopedic.

DR. SAMET: Thank you. Actually, it's not a length contest.

DR. HECK: We win. Yes.

Committee Discussion

DR. SAMET: Dan, let me ask you just a couple questions. I mean, the way you're constructing this, are you going to be able to share drafts? I guess your comment about smoke chemistry, for example, and you know we've seen some issues about menthol in particulate matter, for example.

Are there drafts that you might be able to share in advance that you feel would be helpful, having seen the development of the report by the voting members? So that's the first question to you.

DR. HECK: I guess, as I stated before, that was the intent. But the way we're getting close to this time deadline, I think the report will be provided to the FDA, who asked for it, as soon as possible, on or before that deadline. But that deadline is approaching quickly, so I don't anticipate the report being available in draft or final form, much before the deadline.

We certainly have to circulate our draft among the representative parties to give them an opportunity to comment. I'm hoping there won't be extensive comments.

To your second question about the chemistry, for instance, frankly, there's not a lot of chemistry. There is scattered chemistry available in various industry studies that are available on the document websites, but the main chemistry information we have I think was included in the 2010 review paper as an appendix, that data having previously been unpublished, but was published in that fashion, but set aside is an appendix to clarify that it was not reviewed, published literature.

I did see in the information packet a 2002 industry white paper. The chemistry information in that paper is identical. It is the same as in the 2010 review paper's appendix, so there's nothing -- I'm not recalling anything unique in that.

DR. SAMET: Good. Probably just as a follow-up, I think recently, for example, both you and John sent some helpful references. And if as you compile references -- I mean, perhaps short of a draft -- if you see something that you think is critical or useful, and you sent it on, we could share it and see if there is something --

DR. HECK: Yes. I am glad you mentioned that because, of course, as soon as I sent that little packet of PDFs, I found another one that was just as good. But as I understood it, the date for getting things in for consideration had passed. I know just this very week, on Monday, I saw a new paper on nicotine and tobacco research regarding adolescent smoking in Native American populations with some menthol data contained. And somehow, very kind of late breaking would be --

DR. SAMET: Yes. Apparently, Caryn has just whispered in my ear that that would be for public submissions, but you could share references. As a member of TPSAC, you could share references with us. So, again, if you see something --

DR. HECK: Yes, yes. And by the same token, if you're aware of anything that I might not have
DR. SAMET: At some point, there will be a central database of references assembled, and then we can certainly share that when it's -- and that shouldn't be too far off, I hope. It can't be too far off.

DR. HECK: I'll take a special look at the smoke chemistry, but, as I'm recalling, there isn't a whole lot published, surprisingly, given the prominence of the topic. I had called the attention of the group to the Technical Journal of the Tobacco and Smoke Sciences, the Beitrage Journal, we call it. Most of what's published, that's unfortunately not to date been indexed on PubMed or anything, so it's hard to find unless you know where to look. There is an effort on the part of the journal to get listed on PubMed, but it's just underway now.

DR. SAMET: Are there other questions for Dan? Comments? Yes, Cathy?

DR. BACKINGER: Just a quick question. Given the modeling data that David Mendez presented, and then David Levy, is the industry report going to comment or analyze or do anything with those data? Just curious.

DR. HECK: I only saw the model presented for the first time when the public did at the last meeting and with some more information this time. My initial sense of that model is that what we really lack is input numbers that we can plug in with confidence. You can choose one survey or another to do that.

But no. There have been some models developed in the industry for kind of related topics, things like harm reduction, or smoker's products (unclear), that kind of thing, not specific for the menthol question because the menthol questions didn't arise until fairly recently.

DR. SAMET: Any other questions for Dan?

Mark?

[No response.]

DR. SAMET: Maybe Mark is gone. He hung in for a long time, though. If nothing else, let me just ask before we finish up, if there's anything else. I do think, though, I have to have some discussion about the March 17th/18th meeting, to just get organized on that, but that will happen over the next week or so, I think.

DR. DEYTON: It will have to.

Adjournment

DR. SAMET: It will have to. Yes, yes. Let me thank everyone for a lot of hard work, the public for your input. We are all looking forward to March 23rd. Thanks, and see you in a couple of weeks.

(Whereupon, at 3:09 p.m., the open session was adjourned.)
<table>
<thead>
<tr>
<th>Page</th>
<th>Column 1</th>
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<tr>
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</table>

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(2) 420 - advice

March 2, 2011

FDA Center for Tobacco Products
Tobacco Products Scientific Advisory Committee (Open)
concerned (2) 46:18;71:8
concerning (2) 15:3;20:10
concerns (6) 41:11;48:12;123:6;17;160:7;171:14
conclude (11) 55:11;14;19:56;5;71:16;20:73;19:79;12;126:6;12;167:27
concluded (3) 151:14;21;164:12
concluding (2) 165:1;169:9

FDACenter for Tobacco Products
Tobacco Products Scientific Advisory Committee (Open)
March 2, 2011

covered (5) 13:2;19;20:64;16;79:17;114:11
covers (4) 61:3;5;71:12;77:20
CPS-TUS (1) 136:11
Crack (3) 59:18;76;7,11
CRADAs (1) 14:9

(7) concerned - customer
D

DABT (2)
5:15:6:1
daily (1)
144:18
Dakota (1)
4:14
Dan (20)
18:3:38:21:42:18;
44:21:61:12:64:3:74:2;
77:2:102:3:121:21;
122:16:131:4:132:9,10,
20:14:10:171:11;

dangerous (1)
60:2

dangers (2)
161:12,15
Daniel (2)
5:15,15:6

dash (1)
5:15;15:6
DeLeeuw (4)
4:6
Delaware (1)
4:6
DeLeeuw (4)
3:7:17:11,11:104:10

deliberations (2)
1473:3:159:22
deliver (1)
120:9

delivered (2)
63:7:143:15
deliveries (1)
57:16
delivery (1)
121:19
demand (1)
159:3
Democrat (1)
156:12
demographic (6)
82:19;83:20:85:5,11;
98:8;174:10
demonize (1)
161:2
demonstrated (1)
150:18
demonstrating (1)
43:3
Denver (1)
3:15
Department (4)
2:4:3:12:8:17:12
Departments (1)
2:14
dependence (10)
2:14
dependent (1)
129:9
dependant (1)
72:15

deyton (4)
8:9;17:14,14;183:8
diagram (1)
41:22


diet (1)
41:22
diet (1)
122:17
different (1)
99:11
difference (14)
27:3;16:20:32:22;
33:8:10:11:12:34:21;
35:15:107:22:21;114:4
140:22
differences (10)
27:18;54:19:99:4;
120:13;121:10,12:13;
124:17;28:20:12;93

different (45)
26:17;20:36:18:37:18;
38:6;9,13:40:10:47:7;
58:6,7,13,18,19:67:2;
113:15:168:19
design (2)
150:14:173:19
Despite (1)
160:7
destination (1)
89:3
detail (1)
75:8
detailed (1)
143:14
details (1)
12:7
determination (3)
20:11,14;153:18
determine (1)
63:7
determined (2)
13:6,14
detrimental (1)
146:13
deuterated (1)
67:1
devastating (1)
158:7
develop (4)
36:15;38:18;39:22;
65:20
developed (4)
67:1:104:1;135:12;
182:13
developing (6)
79:1:136:16;137:21;
142:15,21:171:12
development (3)
64:14;105:20:178:11
developmental (1)
95:3
device (1)
72:15
deagram (1)
41:22

direct (2)
111:16;133:13
direction (2)
34:11:166:2
directly (4)
117:22;161:14;
165:22:172:13

director (7)
3:10:5:7:2:8:10,17,
21:18:21
disagree (1)
148:21
disciplines (1)
174:18

disclaimer (1)
82:3
disclose (2)
15:2,5
disconnect (1)
43:4
discount (7)
44:6;46:9:98:6,16;
112:1:146:20:173:11
discourage (1)
147:12
discriminatory (1)
157:13
discuss (8)
18:16;57:8;76:16;
79:22;80:3:105:8,10;
164:22
discussed (12)
11:10:14:18:21:13;
24:2;56:8:78:7,19:75:9;
102:17;105:11:175:11;
176:1
discuses (2)
51:10,15
discussing (6)
156:7,172:19
discussion (17)
A Matter of Record

(301) 890-4188

March 2, 2011

Min-U-Script®

99:1
FD&C (1)
13:17
FDA (45)
8:8;12:5,6;13:6,11,18;
15:17,16:2,17:13,14;
18:18,20:8,14,21:1,4,6;
23:10,20:7,4,7,8,7,4;
19:82:6,133:1,5,8,17;
134:2,141:12,12;
142:15,143:7,160:20;
162:21,22:163:11,19;
167:3,170:15,15,172:8,
10,16,173:6,177:10;
178:17
FDA's (3)
15:4,20:5,142:12
fear (1)
160:2
fears (2)
123:9,11
feast (1)
106:13
features (1)
122:2
February (2)
82:2,146:15
fed (1)
159:4
Federal (13)
3:9,11:20,12:16,19,
21:13,1,8,12,19:150:21;
152:7,153:17,19
feedback (2)
22:5,170:4
feeds (1)
114:6
feel (1)
162:9,168:10,178:10
fellow (2)
152:6,153:20
female (2)
98:10,19
fervishly (1)
171:20
few (8)
11:8,61:4,73:5,86:9;
92:1,135:13,14,48:13
field (2)
112:16,113:1
fifth (1)
107:2
fighting (2)
155:18,19
figure (3)
42:3,90:13,95:6
figured (2)
29:1,2
figures (3)
89:5,94:7,104:3
filed (1)
150:22
filet (2)
giving (1)  
20:22  
glad (3)  
22:8;147:16;180:6  
glean (2)  
119:12;124:15  
glucuronidated (1)  
70:14  
glucuronidation (2)  
54:3;70:14  
glucuronide (2)  
52:20;68:2  
goal (3)  
11:13;143:8;160:20  
goals (1)  
134:9  
goes (5)  
34:21;59:7;118:19;123:12;165:4  
gold (1)  
69:5  
Good (17)  
11:4;23:3;50:9;101:13;103:18;104:9;116:8;124:20;141:22;142:5;148:5,11;151:8;168:3;149:17;21:180:9  
government (16)  
governments (2)  
155:19;161:21  
Governments’ (1)  
161:2  
Graham (1)  
81:10  
grant (2)  
13:11;18  
Granted (1)  
43:7  
grants (2)  
14:9;148:9  
graphic (1)  
43:1  
graphs (1)  
104:3  
great (7)  
76:1;85:10;111:14;114:20;118:21;134:2;159:22  
greater (8)  
greatest (1)  
75:20  
greatly (3)  
59:21;76:8;177:15  
Greece (1)  
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March 2, 2011

(13) ideas - into
intravenous (1) 59:8
intriguing (1) 166:22
intrinsinc (1) 119:18
introduce (2) 11:9;16:8
Introduction (4) 16:6;18:20;103:17;104:18
inverse (2) 43:4;123:5
inverted (1) 34:22
investments (1) 14:8
invited (1) 15:4
in-vitro (5) 53:13;54:1;68:16;69:18;70:4
in-vivo (1) 70:16
involve (3) 72:17;73:2;159:15
involved (3) 54:22;76:20;171:12
involves (3) 14:12;136:22;162:1
Iran (1) 155:17
ironic (1) 156:5
irritating (1) 52:4
irritation (3) 51:15;52:6,8
isolation (2) 62:10;75:17
issuance (1) 152:18
issue (16) 119:18
issue (16) 119:18
issue (16) 119:18
isolation (2) 62:10;75:17
issuance (1) 152:18
issued (1) 14:22
issues (10) 11:14;14:18;15:3;35:22;61:14;143:5;149:16;160:4;172:18;178:7
Italian (1) 113:12

K
K-50 (1) 7:7
Karen (5) 3:7;17:11;103:9;104:9;168:20
Karen's (1) 103:18
Keck (1) 2:5
keep (1) 26:5
keeping (1) 26:2
keeps (5) 23:13;14:18;32:13;20
kept (2) 28:7;32:20
keep (2) 169:22;167:2
kids (3) 101:21;147:13;159:9
kind (32) 99:21;101:20;106:7;110:8;110:22;111:12;15:19;112:8;113:5;114:2;118:8;16:19;9:10;17:12;10:10;19;12:17;13:5;169:19;172:5;173:17;175:4;16;17;16;17;1;176;20;180:15;182:13;15
kinds (2) 107:5;136:15
kinetics (1) 52:16
knowledge (2) 136:12;159:21
known (3) 106:21;129:1;133:13
knows (1) 156:1
Koger (1) 7:7
Kool (40) 82:16;88:13;89:6;10;10:15;16;90:4;5;7;9;11;22:9;1;2;6;8;11;22;92:11;16;93:13;19;94;3;9;14;17;16;15;15;97;8;818;98;1;1;3;4;20;99;3;14
Kools (1) 89:21
kudos (1) 150:6

L
label (1)

A Matter of Record
(301) 890-4188

(14) intravenous - likely
Likewise (1) 133:17
liking (1) 113:11
limitation (3) 69:6;99:15;101:18
limited (6) 13:3;69:20;78:21;85:12;145:4;9
limiting (1) 70:1
limits (1) 88:19
line (2) 69:11;71:19
linearity (1) 35:7
link (2) 76:4;111:17
linkage (1) 76:2
linked (1) 75:18
listed (5) 29:22;30:11;17:50:12;181:18
listened (1) 134:11
literature (19) 58:5;60:14;19;61:8;11:65;6:110:3;112:16;113:1;114:5;18;115:5;14:17;16:7;138:1;174:7;175:10;179:14
liver (3) 66:4;8:69:21
lives (8) 139:16;20;21:22;140:7;155:21;158:10;161:22
Living (1) 3:10
LLC (2) 6:4;15:16
L-menthol (2) 62:17;20
local (5) 3:8;62:1;65:17;66:1;2
locally (1) 66:7
lodging (1) 133:16
LoFi (1) 97:5
low (9) 45:18;52:7;11:22;53:8;54:13;58:14;63:12;95:4
lower (9) 25:6;29:8;54:14;58:8;59:3;68:1;91:21;108:22;138:10
low-nicotine (1) 55:13
low-tar (2) 55:12;97:5
low-volume (1) 57:14
low-yield (1) 51:7
Luby (1) 5:9
lunch (4) 18:14;78:5;80:4;102:17
luncheon (1) 80:7
lunchtime (1) 79:20
lung (4) 53:5;66:3;7:28;22
lungs (2) 53:7;9
luxury (1) 162:4
machines (1) 57:19
Macon (1) 6:6
magazines (2) 109:8,12
magnitude (2) 149:5;169:20
main (2) 75:10;179:8
maintaining (1) 47:3
maintains (1) 139:9
major (5) 43:6;66:13;79:9;174:15;18
majority (2) 18:8;99:9
makes (6) 51:12;54:10;56:6;77:7;153:3;170:15
making (11) 20:17;44:9;65:5;111:17;116:17;120:19;133:3;159:9;166:1,18;169:19
man (1) 156:18
Management (1) 8:3
manipulable (2) 113:3,8
man's (1) 157:6
manufacturers (2) 18:2,4
manufacturing (4) 5:16;6:3;15:9,10
manuscript (1) 141:12
many (14) 32:14;45:19;47:22;106:21;107:4;134:7,7;147:8;148:8;157:5;159:4;166:21,22
MARC (14) 1:10;14:15;19:8,13;37:9;94:21;143:13;145:21;162:11,12;163:18;171:6;183:5,13
Marijuana (1) 123:10
Mark (20) 3:1;16:10;13:42;14:1;50:1;70:19;79:17;100:9;10:10;123:22;124:1;132:1;141:18;147:20;154:21;164:1,171:8;182:20,22
marked (1) 33:7
markedly (1) 39:10
marker (1) 69:2
market (14) 33:9;39:6;7;48:14,17;21:63;5;17;93:8;94:5;99:2;102:9;149:21;159:14
marketed (4) 106:17;11:19;124:19;130:7
marketing (42) 95:6;102:8;105:7,11;19:106;3,16;18,20;21;107:5;6;109:19,21;11:2;112:2;114:13;115:14;16;17,9,12,15;16,17,19,20;117:1;119:11,14;120,22;121:2,5,9,11,11;124:9,10,12;17;125:9;176:8
markets (2) 160:12,14
marking (1) 102:6
Marlboro (4) 96:15;98:15;99:18,19
Maryland (4) 1:15;4;20:7;15;8,14
Massachusetts (1) 21:3
masses (1) 156:3
match (1) 30:21
matched (1) 31:2
material (2) 107:12;118:21
materials (2) 50:12;105:6
matter (3) 67:21;171:6;178:7
matters (3) 14:17;18;16:69:9
maximizing (1) 161:13
maximum (1) 75:3
May (27) 14:7;15:2;19:18;11;19:19;20:1;43:11;45:10;48:9;54:6;64;15;66:2;79:4;87:16;124:6;310:1;133:12;145:6;151:2;165:18;166:11,16;167:21;172:9;176:2;181:17
maybe (12) 40:18;66:17;77:4;100:17;118:8;123:14,14;152;9;172:3;177:7;9;182:22
McAfee (9) 7:1;17:15;15:43;17;44:22;45:15;119:5;167:13;170:3
McDonald's (3) 113:22;114:2,3
MD (9) 2:2;11;3:1;4:9;6:15;71;10;8;9:16
mean (8) 25:13;47;17;108:2;120:5;152;15;168:11;178:3;180:2
meaning (2) 25:9;31:6
means (5) 18:13;24:21;25:4;34:12;150:20
measurable (1) 173:19
measure (2) 68:19;163:9
measured (3) 67:1;75:10;151:16
measurement (1) 145:12
measures (4) 129:6;12;141:8;163:13

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