

1 Should the target be lower, I wouldn't
2 identify it specifically with a bacterium because I
3 think the bacterium is a bacterium, and the clinical
4 cure rate should be the same, and I have not heard any
5 data that PSSP is any different in virulence than
6 PRSP.

7 So we're either dealing with different
8 patient demographics or we're dealing with inadequate
9 drug levels over time. So I would think that in the
10 targeted regimens, we have to make sure that we
11 demographically stratify kids under two, day cares, 15
12 siblings, whatever, but I think that's the way we have
13 to approach it.

14 CHAIRMAN RELLER: Dr. Murray.

15 DR. MURRAY: Yeah, I agree with that. I
16 think I'm not to the stage where I would necessarily
17 accept much of a lower cure rate, but if the option
18 were an oral drug with a lower cure rate versus IV
19 vancomycin for ten days as my only alternative, if
20 that became the state of affairs, then I would accept
21 a lower cure rate.

22 CHAIRMAN RELLER: Dr. Ramirez.

23 DR. RAMIREZ: Again, I have the problem of
24 the definition. What is the meaning of all comers?
25 Because, again, if all comers implied any child with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 otitis media is going to be enrolled in the study,
2 then it's going to be by definition a different
3 population because already even though we agree that
4 penicillin resistant is not more virulent than
5 penicillin susceptible.

6 We also agree that penicillin resistant is
7 a marker of abnormal host, and these are the patients
8 that are going to have the infection. Then if you're
9 going to have a trial for all comers, and all comers
10 meaning 30 percent of the patients are going to have
11 no bacteria in the middle ear, some are going to have
12 viral infection, others are going to have H. flu.
13 They're not having a normal population compared with
14 a very abnormal population.

15 Then I would have to accept a lower cure
16 rate, but I don't like to accept lower cure rate. I
17 want to satisfy for a population, have the same risk
18 factors, and then accept -- I will not like to accept
19 a lower cure rate as long as all comers is adjust for
20 the population of penicillin resistance.

21 Otherwise I accept the low rate.

22 CHAIRMAN RELLER: Dr. Soper.

23 DR. SOPER: I essentially agree with what
24 Dr. Leggett said. This is not a bug problem. It's
25 probably an issue of risk factors for resistance or

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 recurrence, and anatomical issues, and the problem
2 with the study as presented is a dosing problem.

3 There wasn't enough time above the MIC,
4 and so maybe some sponsors should go to 18 to one or
5 100 mcs per kg or something, and maybe we wouldn't
6 even be having this discussion.

7 CHAIRMAN RELLER: To me, going for lower
8 cure rates is a very slippery slope, and either a drug
9 works with a reasonable level of confidence compared
10 with an ineffective agent or no agent or it doesn't,
11 and if we don't have therapy, we have to live with
12 that.

13 Fortunately, in this entity, even those
14 who get no treatment may get better.

15 I think it also emphasizes the importance
16 of comparative trials, and stratification with numbers
17 and confidence intervals by MIC and recognition of
18 PK/PD data, so that all of that comes together.

19 There is a point when you put those things
20 together at which the response rates as the MICs go
21 up, in your heart you know that they may be different,
22 but the data are not enough to say that they are
23 different.

24 So I think trying to set with really tough
25 organisms and resistant organisms, we'll accept 40

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 percent success, whereas with other things we expect
2 70 percent is a mistake, but rather, look at where the
3 natural falloff comes as you get to an untreatable
4 potentially MID with the agent under evaluation in a
5 comparative trial because something is going to be
6 started before one actually knows what the MIC is, as
7 was done in the case here.

8 And I think the data are very telling when
9 you put it all together with this compound by MIC.

10 Dr. O'Fallon.

11 DR. O'FALLON: Okay. I think that there
12 ought to be a lower bound that's chosen about what we,
13 you know -- a certain percentage, say, that we would
14 expect would be cured or sterilized or whatever. I
15 don't know what it is. It's got to be over 30 percent
16 since there seems to be that much that's just
17 background. It's got to be I don't know what you're
18 talking about, 50, 60, whatever it would be. I don't
19 know.

20 But whatever it is, I think it's important
21 that the analysis will be done that will rule out
22 values less than that boundary. Just don't go -- if
23 you say it has to be 60 percent, then just don't go
24 for a point estimate that's at 60 percent. It has to
25 be a confidence interval estimate where 60 percent is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the lower bound, period, that type of thing.

2 What happens then is in these rare
3 populations like the ones that are penicillin
4 resistant. They have to have -- they're going to be
5 smaller numbers. They're going to be smaller samples
6 necessarily because they're relatively rare, and
7 therefore, they're going to have to have higher rates
8 in order to get -- you're going to have to see a
9 higher proportion of successes in a small sample than
10 you are in a big sample in order to get that lower
11 bound above, say, 60 percent.

12 But I think that we should have some kind
13 of a -- set some kind of a lower bound that says we
14 want -- this much we must have in order for it to be
15 considered efficacious.

16 DR. WALD: I agree with that comment. I
17 think we set lower bounds all the time. We say that
18 when a child has uncomplicated acute otitis media and
19 it's the first episode and they don't have any risk
20 factors, even though we know amoxicillin doesn't work
21 all the time, we recommend it because we say it works
22 most of the time, 85 percent of the time, 90 percent.

23 And so we are setting, and when we have a
24 situation in which we know that it's less likely to
25 work because there are those risk factors, then we say

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we change to something else.

2 So I think we can set, it's reasonable to
3 set a lower bound before we would advertise any
4 antimicrobial as being good in patients who were
5 likely to have resistant organisms, and I would set
6 that lower bound at 70 percent.

7 CHAIRMAN RELLER: Dr. Ebert.

8 DR. EBERT: I think that the clinical cure
9 rate needs to be characterized with regards to the
10 timing of that assessment respective to our point
11 number one. If we're determining our clinical cure at
12 the end of therapy, I think that the clinical cure
13 rate should be the same as it is for all comers.
14 There should be no lenience, if you will, at that
15 point.

16 However, if we're determining clinical
17 cure at a later follow-up, I'm in complete agreement
18 with Drs. O'Fallon and Wald.

19 CHAIRMAN RELLER: Dr. Giebink.

20 DR. GIEBINK: I agree that there's no
21 rationale for having a different cure rate for
22 penicillin sensitive and resistant pneumococci.

23 I think that the cure rates should be
24 bacteria specific, and that the cure rate should
25 exceed the spontaneous cure rate, and so Dr. O'Fallon

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and I are pretty close. If the spontaneous cure rate
2 for pneumococcus is 20 percent and Haemophilus is 50
3 percent, one could arbitrarily say exceeded by ten
4 percent, 20 percent, whatever.

5 But that seems to be a rational basis for
6 setting a threshold.

7 And, finally, I suggest that overall cure
8 rates that are not bug specific should be avoided at
9 all cost; that we should be talking about cure rates
10 that are bug specific.

11 And the reason for that, of course, is
12 that these overall rates are so dependent on the case
13 mix of the sample you happen to enroll that I -- now
14 a comparative trial might help in that regard, but
15 very difficult to evaluate.

16 CHAIRMAN RELER: Dr. Rodvold.

17 DR. RODVOLD: I agree with my colleague,
18 I guess, to the right of me and the last three or
19 four. The other caveat I'd put though is that I think
20 the confidence interval has been very important today.
21 I think that's a point that I think we need more
22 assistance, more looking at, but I think the other
23 thing that's shaky when you look at these data is that
24 when you get out to the right-hand side of it, your
25 n's are going down so low. So your confidence

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 intervals are being influenced by you n value as well.

2 So I think you've got to look at
3 confidence intervals and try to to create some magical
4 number, which is what we're talking about, but then at
5 the same time you almost get back to what's the sample
6 size got to be with that to make that confidence limit
7 to be useful to you, too, and so I think that's
8 probably the struggle we saw today when you got way
9 out there. You might have a good point number, but
10 the confidence intervals are opening up on you because
11 you were down to four people.

12 So I agree with everything, but I
13 emphasize that I think we need more assistance to
14 guidance to statistical ways of looking at this and
15 how to interpret it with right size numbers, but also
16 small numbers.

17 DR. DANNER: I guess I would find it
18 difficult to set a lower bound for a cure rate, and
19 you know, it just seems that there's an arbitrariness
20 to that because there's not enough information, and
21 clearly the population of people with acute otitis
22 media is complex, and there are ways to pick out
23 subsets of that population for study.

24 So aside from evaluating that issue when
25 you have an adequate comparator in a trial, I think

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it's very hard to know what that lower boundary is
2 going to be for any particular study that you design.

3 CHAIRMAN RELLER: Thank you, Dr. Danner.
4 Dr. Chesney.

5 DR. CHESNEY: I know we're wanting to get
6 through this as soon as possible, but Dr. Giebink has
7 just brought up a point that I wondered if he could
8 elaborate on a little bit.

9 You said you think the cure rate should be
10 bug specific. What exactly do you mean by that? That
11 you would accept a lower cure rate for one organism as
12 opposed to another?

13 DR. GIEBINK: Actually I mean I would want
14 a higher cure rate for some organisms than another.
15 I would want a cure rate of 60, 70 percent for
16 Hemophilus and I'd probably settle on a cure rate of
17 30, 40 percent with pneumococcus.

18 But I don't think that an averaged cure
19 rate across the sample would help very much unless I
20 knew the case mix extremely well.

21 DR. CHESNEY: Why would you accept a lower
22 cure rate for the pneumococcus than for H. flu.?

23 DR. GIEBINK: Because I'm looking at rate
24 differences between what would happen spontaneously
25 and what's the attributable effect due to the drug.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So I would want the same rate difference
2 for all of the organisms, but the rate, the
3 spontaneous rates themselves differ.

4 CHAIRMAN RELLER: Which for penicillin
5 resistant pneumococci we don't know the natural
6 history.

7 DR. GIEBINK: And that's why it should be
8 the same.

9 CHAIRMAN RELLER: Dr. Murray and Dr.
10 Cross.

11 DR. MURRAY: Yeah, it's more of a question
12 for Dr. Wald who mentioned the 70 percent figure, and
13 may I assume that's at the end of therapy as opposed
14 to the test of cure?

15 DR. WALD: Yes.

16 DR. MURRAY: Okay. Because, in fact, the
17 cure rate at the end of therapy for this compound was
18 good, was 80, 89, I think.

19 DR. WALD: Right, but if we would look at
20 other antimicrobials and say could we recommend them
21 for cases of otitis media, which we suspected to be
22 caused by resistant pneumococci, what would we say
23 would be something we would endorse?

24 I mean, certainly Scott is right. If we
25 know the spontaneous cure rate is 20, 40 is better

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 than 20. On the other hand, it's hard to be
2 enthusiastic about a drug that only gets you that much
3 above what is spontaneous cure.

4 So the way I would frame this question is
5 what would make us enthusiastic about endorsing a
6 particular drug as being effective against resistant
7 organism, and so, again, it varies with spontaneous
8 cure rate, but, you know, we don't want to be
9 marginal. We don't want to be ten percent better than
10 cure. Of course we want to be 100 percent, but what's
11 the least that we would consider to say that we want
12 to endorse this particular product as effective in
13 resistant pneumococci?

14 DR. GIEBINK: That question was actually
15 asked not with respect to an anti-infective, but to
16 pneumococcal vaccine and published in Peds. I.D.
17 Journal several years ago.

18 Parents would accept very small rates
19 differences with a vaccine. Remember we're looking at
20 seven to 12 million cases of pneumococcal disease a
21 year in the United States, and a ten or 20 percent
22 difference is a lot of children.

23 And parents accept those what we would
24 consider small differences. I'd like 100 percent,
25 too.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 DR. WALD: But you're an infectious
2 disease doctor, and someone asks you, "Do you
3 recommend this drug for resistant pneumococci?"

4 You know, sure. Again, it's better than
5 nothing if you have nothing, but what would be the
6 kind of range of clinical efficacy that would make you
7 enthusiastic I think is another way to look at the
8 question.

9 DR. GIEBINK: You're asking me sort of a
10 comparator question, Drug A, Drug B. If I had only
11 Drug A to go with and it gives me ten to 20 percent
12 improvement, of course I'll go with that. If somebody
13 can show me a comparator that's better than that, then
14 I'd go with that. I'd let the market work that out.

15 CHAIRMAN RELLER: Dr. Cross, and then
16 we'll get to question number four, with some guidance
17 from Dr. Soreth.

18 DR. CROSS: I'd just like to ask the FDA
19 staff how this information would be used. Would the
20 physician be told that a certain drug is efficacious
21 or not or it's been shown to have a 40 percent
22 efficacy in a certain situation versus 80 percent?

23 That is, when we provide an answer to
24 this, how does this get translated into information
25 for the practitioner?

1 CHAIRMAN RELLER: Dr. Soreth.

2 DR. SORETH: I think, Dr. Cross, you're
3 getting at what we have started in, I guess, the past
4 five, eight years or so to include in package inserts
5 or labels for anti-infective drugs, and that's often
6 under the heading of a clinical study section where in
7 the particular design of the clinical trial or trials
8 that underpinned a given indication or infection would
9 be described, and then the results given either at end
10 of therapy or test of cure. Typically we've done test
11 of cure or bacteriologic result when we had that.

12 So I think that the package insert or
13 label can serve as a point of education for a
14 practitioner to understand the clinical trial data
15 that underpinned that particular infection or the
16 approval of that indication for the drug.

17 CHAIRMAN RELLER: Question number four,
18 Dr. Soreth. In the committee giving their
19 recommendations, what is the definition of penicillin
20 resistant pneumococci?

21 DR. SORETH: An MIC of two or greater.

22 CHAIRMAN RELLER: To penicillin?

23 DR. SORETH: To penicillin.

24 CHAIRMAN RELLER: Do the data support the
25 safety and efficacy of Augmentin ES for the treatment

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of acute otitis media caused by pneumococci with MICs
2 to penicillin of two or more?

3 DR. MURRAY: Can we have discussion?

4 CHAIRMAN RELLER: Sure, we'll have
5 discussion and then we'll vote.

6 DR. MURRAY: I just wanted to reiterate my
7 comment from this morning. It's too open ended for
8 me. I think it includes everything. They could go up
9 to 16, and they're still covered, and I have a problem
10 with that.

11 So, you know, I don't know what FDA wants
12 to do with it or how the rest of the committee will,
13 but it's a blanket statement that is applicable to all
14 penicillin resistant pneumococci. If it were broken
15 out as to some or maybe many, I might have a different
16 vote, and so I want to say that ahead of time.

17 I think it's very open ended, too open
18 ended.

19 DR. RAMIREZ: May I ask a question?

20 CHAIRMAN RELLER: Dr. Ramirez has a
21 question.

22 DR. RAMIREZ: In one of the presentations,
23 it was mention, if I understand right, the sponsor
24 proposed labeling is for acute otitis media caused by
25 beta-lactamase producing strains, and Streptococcus

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealgross.com

1 pneumoniae, including penicillin resistant strains,
2 MID value assuming equal or higher than two, and if I
3 read this, if I can have a pneumococcal of four,
4 eight, 16.

5 Then the question is do we have a drug
6 here that can cover any type of pneumococcal
7 regardless of the level of resistance, any type of
8 pneumococcal, that is, with an MIC of two or above.

9 Then the question is do we have data here
10 presented that support the use of these animals for an
11 MIC of two or above. It is the question.

12 DR. SORETH: The data presented today for
13 Augmentin ES dealt with a subpopulation of children
14 who had PRSP whose isolates were largely at two and
15 some at four, and that's what we have.

16 So I think to be very specific, that's
17 really the question under consideration. One can
18 address the recommendation in light of language in a
19 package insert that would underscore the
20 bacteriologic, you know, population that was studied.
21 So I think that what question we're asking you is
22 whether or not you feel that safety and efficacy have
23 been shown for this product for the treatment of
24 children with acute otitis media due to PRSP, and the
25 data that you had was an MIC, MICs largely of two and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 four, and limit it to that.

2 DR. RAMIREZ: May I have another question?
3 Because the last question of the breakpoint, if I
4 happen to think in my mind that the breakpoint should
5 be moved, let's say, from .5, the current breakpoint,
6 to one because I consider that up to one I'm able to
7 cure all the patients, then all of a sudden I would
8 say that Augmentin would be indicated for the
9 penicillin susceptible strains because I changed the
10 breakpoint to one or two. Then Augmentin would not be
11 indicated for penicillin resistant because in my last
12 question I already changed the breakpoint, and this
13 pneumococcus is no longer resistant to Augmentin, not
14 is susceptible.

15 Then I don't see how if I -- if I tried to
16 answer the last question and then someone convinced me
17 that the new breakpoint is supposed to be one or two,
18 then I go to call out to this breakpoint that these
19 are going to be organisms susceptible to amoxicillin,
20 to Augmentin, and then all of a sudden I'm going to
21 say that Augmentin is very good for pneumococcal
22 resistance according with my break -- susceptible --
23 according with my breakpoint.

24 But if my breakpoint is two, any
25 pneumococcal resistant to Augmentin, there is MIC

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 four, eight, are going to be not indicated.

2 CHAIRMAN RELLER: This is one of the
3 reasons that we tried to get the breakpoint issues on
4 the table.

5 Dr. Leggett and then we'll go back to Dr.
6 Soreth for clarification.

7 Dr. Leggett.

8 DR. LEGGETT: I think the confusing issues
9 are that the PRSP is defined by the MIC, whereas what
10 we are being asked in a sense is to look at the
11 breakpoint, and so then we also have the trouble of
12 being in the penicillin MIC, the amoxicillin MIC, and
13 the actual breakpoint, and that's where the confusion
14 is arising, I think, from what I hear.

15 CHAIRMAN RELLER: Now, the data presented
16 here or actually where we had mostly twos, then some
17 fours, and a couple of eights were based on
18 amoxicillin MICs. So laboratories test by penicillin.
19 So we can vote straight out for pneumococci that have
20 penicillin MICs of two or more without -- just as it
21 is, and we can see how the vote comes out, or you can
22 say for amoxicillin MICs of two or four or eight or
23 less, or as the sponsor requested in their original
24 slide, amoxicillin MICs of two or more.

25 The NCCLS breakpoints for amoxicillin are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 two susceptible, four intermediate, and eight
2 resistant. And I think Dr. Ramirez has, you know, put
3 his finger on whether this is for resistant strains or
4 susceptible strains depends on whether you're looking
5 at the amoxicillin or penicillin breakpoints as they
6 currently exist in the MIC documents, as well as in
7 the package insert from the previous four to one
8 formulation.

9 Yes.

10 DR. MAKHENE: Just a point of
11 clarification. The sponsor's proposed indication is
12 for penicillin resistant strains with MIC of greater
13 than two, and as Dr. Soreth has said, it was the
14 clinical data had only isolates with two and four.
15 The amoxicillin issue in terms of those levels have to
16 do with the breakpoint issue.

17 So the indication as has been proposed and
18 as has been supported, you know, by the information
19 that's submitted in the packet is for penicillin
20 resistant MICs or penicillin resistant isolates with
21 an MIC of greater than or equal to two.

22 CHAIRMAN RELLER: I understand. So that
23 we all know what we're voting on, so does the
24 committee feel -- yes, Dr. Murray.

25 DR. MURRAY: So in effect, we could be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 voting to say we accept it for penicillin resistant
2 pneumococci that are resistant to amoxicillin, and I
3 think that's a quandary that you don't necessarily --
4 that's a difficult one to put.

5 Isn't standard terminology for many things
6 included the susceptibility to the antibiotic that is
7 going to be used? And are you telling me that they's
8 not anywhere in the labeling would be the requirement
9 that the organism be susceptible to the antibiotic
10 that's being used?

11 That would give us an out and a way
12 because right now we could be voting potentially to
13 say, sure, if it's penicillin resistant, use it, and
14 it could be amoxicillin resistant. It could have an
15 MIC of amoxicillin to eight.

16 Is that the vote? Are we going to take
17 that vote? Are there no options, no outs?

18 DR. RODVOLD: Let me ask for a
19 clarification with this. Then what's the purpose of
20 putting a breakpoint in the insert? I mean, what's
21 the objective of that?

22 Because I agree with what Barbara is
23 saying, is that we're disarraying here. It's just
24 going to be there, but you're going to ignore it
25 almost by saying as long as it's a penicillin

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 sensitivity greater than two or equal, it's okay.

2 CHAIRMAN RELLER: One way of looking at
3 this is the sponsor has made a request, as I
4 understand it, and I think the FDA would like the
5 committee to express, based on the data they've heard,
6 what the assessment of the committee is.

7 Now, if the committee subsequently thinks
8 that -- has some other recommendation for the FDA, we
9 can tell them what we think should be done, but what
10 we've been requested to do is what the sponsor
11 requested: are there data to support that request?

12 Is that a fair summary, Dr. Soreth?

13 DR. SORETH: Yes.

14 CHAIRMAN RELLER: All right.

15 DR. COCCHETTO: Dr. Reller, if I could
16 interject to try to clarify the sponsor's request, I
17 appreciate your indulgence. It has been a long day.

18 What the sponsor has requested is that
19 penicillin resistant isolates would be considered
20 amenable to therapy with Augmentin ES if those PRSPs
21 have an amoxicillin MIC of four or less.

22 DR. RAMIREZ: This is the key of the
23 matter because what the sponsor requests in slide
24 number six is clear. That answer is a clear no to me,
25 but the sponsor requested they represented an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 antibiotic to cure any type of pneumococcal resistance
2 to penicillin. The answer to me is a simple no.

3 If the sponsor requested a different
4 thing, then I have to think, but in this slide, what
5 the sponsor requested is -- I mean, we didn't see data
6 for an antibiotic to take care of any pneumococcal
7 resistance or any level.

8 CHAIRMAN RELLER: I think there is a way
9 out of this.

10 Dr. Soreth, go ahead.

11 DR. SORETH: Does it help if we ask you to
12 respond to the question: based on the data that you
13 saw for children with acute otitis media due to PRSP
14 with an MIC of two or four -- that's the data that you
15 saw -- does the drug work?

16 Does that clarify the question?

17 We're asking you to speak to the data that
18 you saw with regard to PRSP and MICs to penicillin of
19 two or four.

20 CHAIRMAN RELLER: I'd like to propose the
21 following: that we get quickly around the committee
22 whether or not -- and in fairness, drugs are currently
23 considered -- questions come up, does this drug work
24 for penicillin resistant pneumococci, and if that's
25 too broad, too nonspecific, then I think the committee

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 should render an opinion on that.

2 Then we can come back to is this drug safe
3 and efficacious for MICs to amoxicillin of four or
4 less, and if we don't think so, then two or less or
5 one or less or whatever the committee thinks, not that
6 we're going to have votes on all of those.

7 Let's take, first of all, is the simple
8 statement as written in this question, do the data
9 support safety and efficacy for Augmentin ES for the
10 treatment of AOM owing to penicillin resistant
11 Streptococcus pneumoniae, as defined by Dr. Soreth,
12 and NCCLS current guidelines of two micrograms per mL
13 or greater?

14 DR. Archer.

15 DR. ARCHER: Based on how you accept the
16 test of cure data, which I guess is key, I'm persuaded
17 by it. So I would say that efficacy has not been
18 shown.

19 CHAIRMAN RELLER: Dr. Chesney.

20 DR. CHESNEY: I'm sorry. We were talking
21 about something.

22 The MID of two to penicillin or
23 amoxicillin?

24 CHAIRMAN RELLER: Penicillin, penicillin,
25 two or more to penicillin. There are the data there

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 to support safety and efficacy of this compound.

2 DR. CHESNEY: For an MIC to penicillin of
3 two or greater?

4 CHAIRMAN RELLER: That's correct.

5 DR. CHESNEY: No.

6 CHAIRMAN RELLER: Dr. Christie.

7 DR. CHRISTIE-SAMUELS: No.

8 CHAIRMAN RELLER: Cross.

9 DR. CROSS: I'm still concerned that
10 there's discrepancies in the data we haven't resolved,
11 for example, in terms of the four patients who were
12 thrown out earlier and then how do we interpret either
13 test of cure or end of therapy?

14 And so I feel very uncomfortable voting a
15 yes until the database is solidified

16 DR. O'FALLON: Barth, may I jump in here?
17 May I?

18 CHAIRMAN RELLER: Please.

19 DR. O'FALLON: This is a first. I'm
20 asking to go on.

21 It may help people to know I did do the
22 confidence intervals for the data that they gave to us
23 from the company, from the sponsor. If you use the
24 per protocol, which is the one they like to do, the 34
25 people that, you know, the 34 patients that are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 supposedly penicillin resistant, they got a rate of
2 what was it, 82 percent, which was 28 out of 34?

3 And that confidence interval, the low end
4 of it was 65 percent. Okay?

5 If you use the intent to treat group,
6 which is all 41 of them, they had a 71 percent success
7 rate, and that was 29 out of 41, and the lower bound
8 on the confidence interval on that is 54 percent.

9 If you use the FDA numbers, which I didn't
10 have a chance to quick do, they're going to be lower,
11 but there it is. You know, what do you think?

12 That tell us that if you look at the
13 intent to treat that we can rule out -- we know that
14 it's highly likely that the true response rate is
15 higher than 55 percent. Now, is that good enough?

16 If you use the protocol which is best,
17 it's highly likely that it's better than 65 percent.
18 Is that good enough?

19 CHAIRMAN RELLER: Dr. Leggett, your vote.

20 DR. LEGGETT: Do we start from the
21 beginning after hearing that?

22 (Laughter.)

23 CHAIRMAN RELLER: No, no, no, no, no, no.
24 Dr. Cross, I think, did vote, but maybe we'll clarify
25 the vote as a yes or a no.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 DR. CROSS: I thought I wheedled my way
2 out of that, but I guess not.

3 (Laughter.)

4 CHAIRMAN RELLER: The time has come for a
5 yes or a no for pneumococci with penicillin MICs of
6 two or greater.

7 DR. CROSS: I think I would have to say
8 that at least based on the other -- on the analysis
9 offered by Dr. O'Fallon, that I'm inclined to say a
10 case is made for it, although I'm very uncomfortable
11 about that.

12 So I'd have to say yes, but with an
13 asterisk.

14 CHAIRMAN RELLER: That's okay.

15 Dr. Leggett.

16 DR. LEGGETT: I'd have to say no for a
17 couple of reasons. One is the moving target. What we
18 see this year may not be next year. We have several
19 formulations that were now going to be reintroducing
20 different things for. So for the time being, I would
21 say no.

22 CHAIRMAN RELLER: Dr. Murray.

23 DR. MURRAY: I guess I'd have to say no on
24 the -- because of the far end of the MICs, although I
25 think the bulk of the data shows efficacy, but you're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 lumping in -- I can't apply the data for the majority
2 to the minority.

3 CHAIRMAN RELLER: Dr. Ramirez.

4 DR. RAMIREZ: The data that the sponsor
5 presented today at least convinced me that some of the
6 pneumococcal resistant property with an MIC of two has
7 good activity, but they also convince me that when
8 they move into higher MIC, we can see clearly a drop
9 in effectiveness.

10 And to me, if I look at the proposed
11 labeling for all pneumococcal resistant to penicillin,
12 I can see that there's going to be an MIC of two, is
13 going to be four. It may be eight. Then at this
14 moment I have to say no.

15 CHAIRMAN RELLER: Dr. Soper.

16 DR. SOPER: Yes, as long as the MIC to
17 amox.-clav. is less than eight.

18 CHAIRMAN RELLER: No.

19 Dr. O'Fallon.

20 DR. O'FALLON: I don't think -- I don't
21 think it's an overwhelming case of -- because of all
22 these issues, I think that the lower level of -- the
23 twos are driving the fours, eights, and so on, and I
24 think that if they open it up to all comers, I think
25 the success rate will be quite a bit less than that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RELLER: Dr. Ebert.

2 DR. EBERT: Given there are no upper
3 limits on the resistance, my vote is no.

4 CHAIRMAN RELLER: Dr. Giebink.

5 DR. GIEBINK: I vote no. There are some
6 pen. resistant pneumococci, those with amox. MICs over
7 four where neither the clinical data or the PK/PD data
8 support efficacy.

9 CHAIRMAN RELLER: Dr. Rodvold.

10 DR. RODVOLD: I agree with that, and once
11 you put that label there, you're stuck with it for a
12 long time.

13 CHAIRMAN RELLER: And Dr. Danner.

14 DR. DANNER: No.

15 CHAIRMAN RELLER: Now, where we go from
16 here. I would like to propose the following
17 suggestion and get a committee vote, and given the
18 hour, I'll tell you how I slice it and the rationale
19 for the next proposed vote.

20 We heard much information for PK/PD with
21 relation to pneumococci, what's required for efficacy
22 in the therapy of acute otitis media with less
23 susceptible strains. The NCCLS has chosen an
24 amoxicillin breakpoint of two micrograms per mL or
25 less.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealgross.com

1 The PK/PD data, the clinical data
2 presented here to me were a pretty impressive
3 validation of efficacy at two micrograms per mL. It
4 fits beautifully with the PK/PD data.

5 When we go out to four micrograms per mL
6 or eight micrograms per mL, this compound importantly
7 at 90 milligrams per kilogram per day divided into two
8 doses for a sufficient period of time above the MIC in
9 the 14 to one to avert inordinate complications of
10 therapy with the higher dose of amoxicillin may work
11 for strains with MICs to amoxicillin of four or even
12 eight, and in some patients did.

13 But the total number of evaluable cases in
14 which we had pre and post data were small, very small,
15 less than ten in each category, and consequently I do
16 not think that there are data to -- not that it
17 wouldn't work, but the data presented today, there are
18 not a sufficient number of cases to indicate efficacy
19 at four or eight base on the confidence intervals, the
20 lower end of which was below what anyone here
21 discussed accepting.

22 In actual practice, it would be very
23 convenient, were this compound to be approved in this
24 formulation at that dosing regimen, for clinical
25 microbiology laboratories, when there are questions,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 in fact, with the currently published NCCLS
2 breakpoints to say that this compound works with MICs
3 of two or less, which are interpreted as susceptible
4 for amoxicillin MICs.

5 The extra breakpoints in the NCCLS
6 document for penicillin still only apply to
7 meningitis, with the discussion that the less
8 susceptible strains may work at other sites.

9 So I would like to have a vote, starting
10 this time on the left side. Do the data support the
11 safety and efficacy of Augmentin ES for the treatment
12 of acute otitis media owing to strains of pneumococci
13 with MICs to amoxicillin of two micrograms per mL or
14 less?

15 Dr. Danner.

16 DR. DANNER: Yes.

17 DR. RODVOLD: Yes.

18 DR. GIEBINK: Yes.

19 DR. EBERT: Yes.

20 CHAIRMAN RELLER: Dr. O'Fallon?

21 DR. O'FALLON: I'm going to have to pass
22 on this.

23 CHAIRMAN RELLER: We have a pass from Dr.
24 O'Fallon.

25 Yes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 DR. SOPER: Yes.

2 DR. RAMIREZ: Yes.

3 DR. MURRAY: Yes.

4 DR. LEGGETT: Leggett, yes.

5 DR. CROSS: Yes.

6 DR. CHRISTIE-SAMUELS: Yes, and I suggest
7 we put in a table with the breakpoints and the success
8 rates for each of the different MICs.

9 CHAIRMAN RELLER: Dr. Chesney.

10 DR. CHESNEY: Yes.

11 CHAIRMAN RELLER: Dr. Archer.

12 DR. ARCHER: Yes.

13 CHAIRMAN RELLER: So I think we have the
14 clear delineation, Dr. O'Fallon abstaining, everyone
15 else voting yes for two micrograms per mL based on
16 amoxicillin MICs in concert with the current NCCLS
17 documents.

18 So we've got the boundaries, the
19 confidence intervals, Dr. Soreth, for what the
20 committee is clearly comfortable with.

21 Now, with your instruction we can tackle
22 a four and an eight is you wish.

23 DR. SORETH: No.

24 (Laughter.)

25 CHAIRMAN RELLER: Have we truly provided

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you the information you need?

2 DR. SORETH: I think so.

3 (Laughter.)

4 CHAIRMAN RELLER: The confidence interval?

5 No.

6 Dr. Murphy, what would you like of the
7 committee next?

8 DR. MURPHY: We understood your vote to
9 say that this drug does not prove efficacy for
10 penicillin resistant organisms in the treatment of
11 otitis media. Okay?

12 We then asked you to tell us what you
13 would want to see to have that level because to be
14 fair to the sponsors, we need to be able to define for
15 them what it is that you want to see. So that would
16 be most helpful to us, I think, next.

17 CHAIRMAN RELLER: What I think the
18 committee truly tried to say is that the committee is
19 uncomfortable with a recommendation with no boundaries
20 on the degree of resistance given the PK/PD data that
21 was shown, the small numbers, but the suggestion and
22 certainly a confidence interval that the efficacy may
23 not be as great, and certainly the PK/PD data don't
24 support that there is no difference between a two, a
25 four, and an eight with amoxicillin.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 And consequently an open end to just
2 resistant without any upper boundaries, I think, the
3 majority certainly were very uncomfortable with and
4 quite comfortable with something that is a higher
5 breakpoint than is currently for amoxicillin with the
6 FDA, but is in line with the new, revised breakpoint
7 based on PK/PD data and other information from NCCLS.

8 So what additional discussion do you want
9 to take place and what vote?

10 DR. MURRAY: Can I just throw in here
11 because I'm going to have to leave? But I think we
12 said it works for some penicillin resistant
13 pneumococci. We said we thought it worked for some,
14 but not necessarily all.

15 DR. MURPHY: Well, then maybe we could
16 take the subset of are you saying that it doesn't work
17 for empiric therapy, where that may be a population,
18 and only when you have an organism in hand and you
19 know that it's within this range.

20 DR. MURRAY: (Shaking head.)

21 DR. MURPHY: Okay. I just want to make
22 sure.

23 CHAIRMAN RELLER: When the committee is
24 saying that they're quite comfortable that this drug
25 works with amoxicillin MICs of two or less, in fact,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 if one did penicillin MIC testing by current
2 interpretive criteria, some of those strains, in fact,
3 may be -- some, not all -- would be a penicillin MIC
4 of two.

5 But they are not at four -- excuse me --
6 at two of amoxicillin necessarily going to have
7 penicillin MICs of four/eight. We just haven't seen
8 the data. I mean, we haven't seen the numbers.

9 I think the real issue is the discomfort
10 with no upper boundary.

11 Yes, Dr. Leggett.

12 DR. LEGGETT: I'd like to specify that the
13 question on the paper says is Augmentin ES appropriate
14 for empiric therapy. That means we don't know what it
15 is, and the answer to that I think we're all saying is
16 yes.

17 What we're saying no to is we don't think
18 it's been proved that it's appropriate for amoxicillin
19 MICs of four and eight.

20 CHAIRMAN RELLER: And we could take that
21 statement of Dr. Leggett, should there be any
22 ambiguity and see if that's, in fact, what the
23 consensus opinion is.

24 Yes.

25 DR. CHESNEY: I'm just wondering if we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 should vote on the issue of empiric therapy because we
2 never really got around to that.

3 And I would just like to say that the
4 company has done what we asked, which is to do a
5 double tap and to get us the data, and I would like to
6 be very supportive of that. I think I don't know in
7 what way, but I don't want them to be discouraged
8 because we're maybe not coming to the right
9 conclusion, but I wonder if we shouldn't vote on the
10 empiric issue.

11 CHAIRMAN RELLER: Dianne.

12 DR. MURPHY: Just remember we've got other
13 preparations out there for other therapies that aren't
14 penicillin resistant. So I guess we want you to
15 really articulate.

16 Are you saying that even though you don't
17 think the efficacy has been proven here, that then
18 you're recommending it for empiric therapy?

19 CHAIRMAN RELLER: I think Dr. Leggett's
20 summary is what the committee thinks. I mean, the
21 efficacy for two micrograms per mL or less, being a
22 substantial proportion of the strains in the
23 population distributions that we saw, it constitutes
24 a good chunk that fall within that susceptibility
25 category of the strains heretofore being promoted,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 recognized, feared as penicillin resistant strains or
2 let's say not susceptible strains, that is, that most
3 of the twos encompass most of them that are in the
4 penicillin intermediate category based on meningitis
5 breakpoints and some even in the resistant category
6 based on meningitis breakpoints.

7 I think we have something of a semantic
8 issue. It's the open endedness that no matter how
9 high the penicillin MIC is, that the drug works, and
10 I think people are very uncomfortable with that, but
11 it works against strains that heretofore we would have
12 considered resistant.

13 Dr. Chesney, is that the way you see it?

14 DR. CHESNEY: Yes. But there's another
15 issue that seems to be confusing, and that is the
16 penicillin versus amoxicillin, and I guess I'm not
17 clear in my own mind.

18 An amoxicillin of MIC of two translates to
19 what MIC for penicillin?

20 CHAIRMAN RELLER: It is usually going to
21 be two also, but not four or eight or one. It's going
22 to be one or two most of the time. It would fall into
23 the intermediate by current criteria or resistant by
24 current meningitis criteria.

25 DR. CHESNEY: So it's amoxicillin

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 susceptible at two and penicillin intermediate --
2 penicillin resistant at two.

3 CHAIRMAN RELLER: That is correct.

4 DR. CHESNEY: And that's where I think the
5 confusion is coming. I mean we're comfortable with
6 the amoxicillin MIC of two, but that is not an
7 amoxicillin resistant strain, but it is a penicillin
8 resistant strain.

9 CHAIRMAN RELLER: Because the penicillin,
10 as you're well aware, the penicillin breakpoints are
11 based on what is currently -- what is required to
12 treat meningitis, and that's delineated in the NCCLS
13 documents.

14 DR. CHESNEY: And I think if that's
15 confusing for us, that's going to be very confusing
16 for the practitioner to say, yes, you can treat a
17 penicillin resistant strain, but actually it's not
18 resistant. It's amoxicillin susceptible, and I think
19 that's what we're reflecting here, is the fact that
20 we're not doing guidance, practice guidance as we have
21 a label. It's either approved or not approved for the
22 treatment of certain organisms or certain indication.

23 And I think that even though we can put
24 data in there, you know, about what the clinical
25 trials were, there's just a real quandary that's being

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 presented here, and I think Dr. Chesney has
2 articulated that.

3 CHAIRMAN RELLER: Dr. Ramirez, you have a
4 comment you wish to make?

5 DR. RAMIREZ: Yes. I think that I totally
6 agree with your comment that this is going to be very
7 confusing for the general practitioner that we try to
8 have with the package insert.

9 I also -- I mean, the Chairman is trying
10 to put a proposal in the table that's going to be what
11 we all agree, but at the same time, this is not the
12 proposal of the sponsor.

13 You know, we vote in the proposal of the
14 sponsor clear, and probably we should ask the sponsor
15 to come with a new proposal that's going to be
16 acceptable for the committee, acceptable to the FDA,
17 and is going to be able to -- we're going to be able
18 to educate the physicians without confusion based on
19 whatever date obtained for this discussion because
20 this is going to require some thinking.

21 CHAIRMAN RELLER: Dr. Craig, you had a
22 comment.

23 DR. CRAIG: Yeah. The CDC has guidelines
24 as to when the combination of amoxicillin and
25 Augmentin are to be used, and they're not talking

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 about this for every single patient. They're talking
2 about those and where the risk of having penicillin
3 resistant strains are there.

4 So I think are you talking about empiric
5 therapy just to everybody, even older kids, or are you
6 talking about empiric therapy in those where there's
7 a risk of having penicillin resistant strains?

8 DR. SORETH: I think the latter part of
9 what you said falls in between the two. Empiric
10 therapy, all comers, versus therapy for those who
11 would have risks for or be suspected to be more likely
12 to have PRSP, if not documented PRSP.

13 I mean, the reality is that in practice
14 tympanocentesis isn't routinely done. So at the end
15 of the day, you don't know that it's PRSP or what its
16 MIC is in any event, but it's a spectrum. Empiric
17 therapy for everyone, empiric therapy for those who
18 you would highly suspect would have PRSP, or for those
19 who have documented PRSP, the most restrictive.

20 DR. CRAIG: Well, as I say, there are some
21 guidelines out there for when the combination or the
22 higher amount of amoxicillin is needed that could be
23 used and applied to this preparation.

24 CHAIRMAN RELLER: Dr. Ramirez, another
25 question?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE, N.W.
WASHINGTON, D.C. 20005-3701

1 DR. RAMIREZ: I think that the reason I
2 asked the question to the sponsor is they can identify
3 the population as a risk of penicillin resistant
4 because this may be the population for the empiric
5 therapy with this type of formulation.

6 Also, talking about confusion, we're going
7 to have two formulations of Augmentin, and one
8 formulation is going to have a breakpoint of .5. That
9 is the four to one ratio, and the other formulation I
10 hear the committee coming with a breakpoint of one or
11 two. That's going to be a different breakpoint.

12 They are going to have different
13 breakpoints for the same antibiotic, for the same
14 organism based on the formulation that you use. I
15 think that we all agree with what we're trying to say,
16 but to put this in paper is going to require some
17 thinking to avoid extremely confusing the general
18 practitioner.

19 CHAIRMAN RELLER: Drs. Murphy and Soreth,
20 do you want the committee to discuss at all number
21 five while most of us are here?

22 And then, since we had a no for the
23 question in four, but a yes to amoxicillin susceptible
24 by MIC criteria published currently by NCCLS, we can
25 come back to additional studies.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Actually, maybe it would help to get a
2 rendering of an opinion from the committee whether an
3 MIC breakpoint as acceptable of four for amoxicillin
4 is appropriate. What are your instructions?

5 DR. MURPHY: I think at this point we
6 really have enough information that we can probably
7 come to a conclusion or at least have further
8 discussion about the breakpoint.

9 I think we'd really prefer to hear from
10 the committee what are the studies that you want to
11 see so that a product can be labeled for penicillin
12 resistant, for treatment in acute otitis media for
13 penicillin resistant therapy of those organisms.

14 CHAIRMAN RELLER: Dr. Murphy, one of the
15 dilemmas is, I mean, currently, I mean, the committee
16 says we think this compound used at 90 milligrams per
17 kilogram works for penicillin -- excuse me --
18 pneumococci with MICs to amoxicillin of two micrograms
19 per mL.

20 In fact, those isolates are going to have
21 penicillin MICs of two micrograms per mL often, and if
22 we voted for two that would be resistant, but
23 resistant includes two or more, it's the "or more"
24 that I think is where the committee is uncomfortable
25 and I think should be based on the paucity of data.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 But, you know, moving to two or less, I
2 mean, is for pneumococci that are less than
3 exquisitely susceptible to penicillin, including
4 strains up to two micrograms per mL or less, I think
5 the committee is perfectly comfortable with, and that
6 encompasses a large number of strains that either
7 through empirical choice or demonstrated, which is
8 pretty unusual, actual isolates includes a far larger
9 number of patients than previously would have been
10 included by excluding individuals with either having
11 or suspected of having strains of pneumococci with
12 MICs above .06.

13 Yes, Dr. Leggett.

14 DR. LEGGETT: A little point of
15 clarification. When I was talking about empiric
16 therapy, my rationale was empiric therapy for people
17 at high risk of penicillin resistant pneumococcus
18 based on something that Dr. Wald point out.

19 In a low risk patient, if we assume an 80
20 percent cure rate, we're going to be fine. If you
21 look at the frequency distributions of the pneumococci
22 in the Alexandria project and the others, if your
23 cutoff is at four, you've got about between two or 3.7
24 or 5.8 percent of those isolates are above that.

25 And if you go below that, you're still --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and so you're making a two, you're still on that upper
2 range are only dealing with about ten percent of the
3 total isolates even in that high risk group that are
4 going to be above that.

5 So in that sort of empiric therapy,
6 knowing that you're going to fail ten percent of the
7 time, assuming that the drug worked, I wouldn't have
8 trouble with that, but if we have documented
9 penicillin resistant pneumococci with an amoxicillin
10 of four or even three/four, but four or eight or soon
11 maybe 16, then I am not comfortable with it.

12 And so that's what my comments about the
13 empiric part were.

14 DR. MURPHY: So you're really saying what
15 Dr. Craig was saying, is that if one identifies a high
16 risk population, quote, whatever parameters those are
17 defined, that then you would feel comfortable with
18 using this product.

19 DR. LEGGETT: Recognizing that you're
20 going to, for the time being, miss ten percent at
21 least.

22 DR. MURPHY: And that if one had the
23 isolate --

24 DR. LEGGETT: And you have the MIC.

25 DR. MURPHY: -- no usual, and had an MIC

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 within the ranges that have been described, clearly
2 this would also be your product. It's because you
3 need to have clearly indicated where it is not going
4 to work. Is that --

5 DR. LEGGETT: Yes.

6 DR. MURPHY: -- another way of looking at
7 this?

8 DR. LEGGETT: Yes.

9 CHAIRMAN RELLER: Dr. Chesney, we've
10 talked about if we could identify high risk/low risk
11 patients. From what Dr. Giebink presented earlier and
12 prevalence of the strains, how would you go about that
13 as a pediatrician?

14 DR. CHESNEY: Selecting high risk
15 patients? I think that's pretty simple. I think
16 there are children who have already had one or more
17 episodes, children who may have underlying risk
18 factors, such as cleft lip or palate, children who are
19 going to day care, come from large families.

20 I think there are a number of factors
21 there, but if I could just make a comment, I think our
22 problem is the mechanism of action of the antibiotic
23 and the mechanism of the resistance of the organism,
24 and we have seen organisms with a penicillin MIC of 16
25 and 32 in Memphis.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Now, they're rare, but I think, you know,
2 you wonder how high can we go. I mean, why not use a
3 product with 180 milligrams of amoxicillin? You know,
4 it's sort of like -- I don't express myself very well
5 -- but my anxiety is saying blanket this is good for
6 resistant organisms and having people have that
7 security, and then we get an organism with an MIC of
8 16 or 32.

9 But I like the way Jim put it in terms of
10 empiric therapy. I'm very comfortable using this as
11 empiric therapy because I think it is going to cover
12 the vast majority which have MICs of two for
13 amoxicillin and even four I'm comfortable with.

14 CHAIRMAN RELLER: Dr. Murphy, any other
15 instructions?

16 DR. MURPHY: I don't think so. I don't
17 think at this point. I think we've got the message
18 about where you wish -- where you think this product
19 would be useful and where you think this product would
20 not be useful.

21 The question is in face of what we put in
22 the label and what will be marketed, can we safely
23 label this product or effectively label this product
24 for appropriate use for what the committee seems to be
25 indicating they think would be appropriate use.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 If anybody wants to respond to that, I
2 would be welcome to hear your response to that.

3 DR. HARRISON: Well, just as a -- I mean,
4 I'm not a voting person, but I think one of the things
5 that we need to keep in mind is that most of our
6 empiric therapy, if we got 90 percent efficacy with
7 anything, we'd be ecstatic in the clinic. So that
8 stating -- I think what I heard is that for empiric
9 therapy when you don't know but you've got a high risk
10 that this is going to be a troublesome patient, this
11 is that one you don't want coming back because they've
12 been in here before. Using this, but expecting that
13 therapy would not be effective with MICs above a
14 certain point would be a caveat that people can live
15 with.

16 Does that make any sense to you?

17 DR. MURPHY: Yes, I understand that.

18 Is that what the committee is trying to
19 say? I think that's what the committee is trying to
20 say, and I just want to make sure that, despite the
21 external conversation, that that is what is meant at
22 this point.

23 CHAIRMAN RELLER: I think my sense of what
24 the committee and the data presented by the sponsor is
25 that this compound in this formulation at the higher

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 dose is a useful addition and would be efficacious in
2 strains that heretofore many would have considered as
3 perhaps not being susceptible to penicillin, and it
4 works for most of those strains as long as there's
5 delineation somehow in the labeling, the promotion, et
6 cetera.

7 That does not mean that you can forget
8 about penicillin resistance when you use this compound
9 because no matter how resistant they are, it's going
10 to work. And I think that's where the committee was
11 balking and got the sense that this was, you know, an
12 openness in an area of MICs where the numbers were
13 very small. Good up to two, but not beyond.

14 DR. MURPHY: We've lost a lot of the
15 committee at this point, but let me restate then. The
16 committee basically voted no because of the open
17 endedness of the MICs on the resistance.

18 The committee, however, then is saying
19 that it thinks this product has shown, because this is
20 really what the question was, that it could be safely
21 used and has been effectively used to treat a high
22 risk population identified by whatever parameters and
23 will get the majority of those patients at this time.

24 There was another message I was getting
25 though. There was that we think it's going to change

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 so quickly that we don't think we should label it at
2 all because it will change so quickly that your MICs
3 will just keep going up, and the next thing you know,
4 you're going to have nothing, no therapeutic
5 intervention.

6 But I don't mean to say backpedaling, but
7 I mean, I'm just hearing more of a different message
8 from the committee, that you feel that actually there
9 is a place at this time for this agent in a defined
10 population which is at high risk of having resistant
11 organisms.

12 CHAIRMAN RELLER: I think that the
13 committee, and I'm sure that others will, you know,
14 speak up if this is not the case, is that the data are
15 substantial and solid for the therapy of pneumococci
16 with MICs to amoxicillin up to and including two
17 micrograms per mL, and beyond that, the numbers fall
18 off, and if the population shifts to have something
19 with a label of just resistant pneumococci is too open
20 ended.

21 DR. ARCHER: Since I'm still here.

22 CHAIRMAN RELLER: Yes, Dr. Archer.

23 DR. ARCHER: I think one of the points is
24 that -- and I think Bill Craig made this statement at
25 one time in the past -- that, in fact, the MICs to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 penicillin for pneumococci are not rising at a rapid
2 rate. They've kind of leveled off.

3 There are some eights and 16s out there,
4 but most of them are as you see.

5 On the other hand, the MICs for macrolides
6 and sulpha-trimethoprim are rising at a rapid rate.
7 I think we're running out of options, and therefore,
8 I think it's very useful to have an agent that might
9 be effective against pneumococci with MICs at two.

10 CHAIRMAN RELLER: I think it was
11 unanimous, that we concurred with that.

12 DR. MURPHY: Okay. That's what the
13 vote -- I'm just making sure we've got the words
14 behind the vote here of the MIC with amoxicillin was
15 about, what Dr. Archer just said.

16 CHAIRMAN RELLER: We unanimously concurred
17 with that. Safety and efficacy for two micrograms per
18 mL or less, which encompasses, you know, a very high
19 proportion of current strains in the United States
20 that does not seem to be getting dramatically worse,
21 but that's no assurance for the future.

22 DR. MURPHY: Okay, but the linkage here is
23 because we know most of these children won't have
24 these organisms, is that we're going to identify them
25 by these high risk parameters and not a bacteriologic.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Is that the linkage?

2 Anybody on the committee disagree with
3 that statement, you know, anybody who's still here?

4 (No response.)

5 DR. MURPHY: Okay.

6 CHAIRMAN RELLER: Dr. Craig, do you want
7 to comment before we close this?

8 DR. CRAIG: I wanted to get the gist from
9 the committee. You said the numbers fall off. You're
10 talking about the numbers of cases, and that four
11 might be very feasible if more clinical data and more
12 cases were available.

13 CHAIRMAN RELLER: Yes. I mean, the
14 numbers were small at four and eight, but the other
15 part of that is that most of the strains in the United
16 States when you looked at the population distributions
17 -- admittedly there aren't a lot, fortunately, that
18 are beyond that.

19 In other words, this formulation at this
20 dosage would encompass, you know, many more strains
21 than, you know, previously were considered because of
22 the PK/PD data and the higher dosage.

23 DR. LEGGETT: Barth, with one caveat I
24 would add. Not just more numbers of cases, but much
25 better kinetics so that we know the variability in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 kinetics, and recognizing that dynamics, a twofold
2 change from four to eight or four down to two is a
3 huge change in those PK/PD diameters.

4 CHAIRMAN RELLER: Right. So things, you
5 know, get -- I mean, the confidence interval said a
6 lot. I mean, you know, things get -- more uncertainty
7 goes up exponentially when you get up to four and
8 eight, and even dramatically so beyond that, but there
9 was some, I think.

10 We've gone over it.

11 Thank you very much. There was a lot of
12 vigorous discussion, and I thank all for their
13 contributions, and to the sponsor for answering all of
14 the queries put with great detail as well.

15 Thank you.

16 DR. MURPHY: I wanted to thank the
17 committee, too. An outstanding job with a difficult
18 subject.

19 (Whereupon, at 5:38 p.m., the Advisory
20 Committee meeting was concluded.)

21

22

23

24

25

CERTIFICATE

This is to certify that the foregoing transcript
in the matter of: MEETING

Before: ANTI-INFECTIVE DRUGS
ADVISORY COMMITTEE MEETING

Date: JANUARY 30, 2001

Place: GAITHERSBURG, MARYLAND

represents the full and complete proceedings of the
aforementioned matter, as reported and reduced to
typewriting.

Rebecca Davis

Look-See Concordance Report

UNIQUE WORDS: 3,503
TOTAL OCCURANCES: 25,182
NOISE WORDS: 385
TOTAL WORDS IN FILE: 64,903

SINGLE FILE CONCORDANCE

CASE SENSITIVE

NOISE WORD LIST(S): NOISE.NOI

INCLUDES ALL TEXT OCCURRENCES

IGNORES PURE NUMBERS

WORD RANGES @ BOTTOM OF PAGE

- 1 -

10:30 [1] 112:5
10:32 [1] 112:13
10:45 [1] 112:6
10:50 [1] 112:14
12:25 [1] 183:5
12A-30 [1] 5:3
14-day [1] 70:20
16-plus [2] 78:17; 101:22
16s [1] 348:3
1970s [1] 86:14
1980s [3] 25:12; 39:21; 86:15
1:30 [2] 183:3, 6
1:32 [1] 184:2

- 2 -

20-plus [1] 101:21
200s [1] 158:7
20s [1] 163:24
220-something [1] 157:20
23F [1] 73:8
24-hour [1] 49:20
28-day [3] 139:18; 232:7; 250:13

- 3 -

30-day [2] 82:1; 263:12
30-some [1] 113:20
3:34 [1] 269:13
3:45 [1] 269:10
3:49 [1] 269:14

- 4 -

40s [1] 153:6

- 5 -

50-755 [1] 4:6
50s [1] 153:7
5:38 [1] 350:19

- 6 -

6B [1] 72:24

- 7 -

7-valent [2] 31:17; 35:24
70s [1] 137:14

- 8 -

80s [3] 107:23; 126:8; 137:14
8:08 [1] 4:2

- 9 -

90s [7] 16:21; 19:7; 32:10; 222:3, 14;
242:11; 254:20

- A -

a.m. [3] 4:2; 112:13, 14
abalics [1] 31:4
abilities [1] 101:2
ability [3] 67:9; 141:16; 290:4
able [13] 10:11; 14:21; 139:10; 148:1;
168:25; 226:8; 248:6; 271:9; 300:13;
316:6; 331:14; 337:17
abnormal [2] 302:7, 14
abnormalities [1] 27:3
absence [4] 16:23; 26:10, 13; 266:23
Absent [1] 139:19
absent [1] 169:17
absolutely [3] 47:6; 147:19; 246:2
absorption [2] 46:15; 272:8
abstaining [1] 330:14
abundantly [1] 298:15
academia [1] 243:22
accelerated [1] 142:16
accelerates [1] 142:13
accept [19] 274:23; 299:12, 13, 18; 300:9;
301:17, 20; 302:15, 16, 18, 21; 303:25;
309:11, 21; 311:18, 23; 319:1; 322:15
acceptable [15] 18:7; 78:8; 217:15, 19;
271:2, 5; 280:22; 297:23; 298:2; 299:6;
300:14, 23; 337:16; 340:3
accepted [1] 298:23
accepting [1] 328:21
access [1] 64:14
accessible [2] 248:17; 296:17
accompanied [2] 26:6, 14
accompanying [1] 26:18
accomplished [1] 75:11
accordance [1] 4:24
according [3] 138:18; 316:22, 23
account [1] 97:12
accurate [3] 25:6; 140:14; 194:12
accurately [2] 105:5; 144:8
acetaminophen [1] 67:4
ache [1] 62:13
achievable [2] 64:12; 273:12
achieve [2] 81:19; 177:12
achieved [1] 267:15
acid [9] 78:22; 79:7; 81:5; 128:19;
175:12, 18; 176:6; 179:22; 265:4
acknowledge [2] 128:8; 218:10
acquire [1] 31:20
acquired [1] 187:7
acquisition [2] 61:10; 272:20
Acting [1] 7:7
action [1] 343:22
active [7] 13:16; 33:18; 42:10; 109:14;
250:6; 300:14, 15
activities [1] 34:6
activity [19] 33:24; 38:23; 41:5; 46:10, 25;
47:2, 7, 16; 56:15; 95:16; 128:20, 22;
134:21; 135:23; 179:20; 215:23; 219:11;
220:1; 326:7
actual [9] 59:12, 18; 131:18; 191:15;
199:17; 201:6; 317:13; 328:22; 341:8
acutely [1] 136:21
adaptation [1] 178:16
add [4] 63:6; 166:3; 269:3; 349:24

added [5] 41:10; 163:14; 179:16; 201:11;
278:19
addition [7] 45:8; 144:20; 190:13; 191:20;
202:11; 208:13; 346:1
additional [10] 141:6; 201:7, 22; 213:10;
218:6; 257:22; 264:21; 287:14; 332:8;
339:25
address [23] 6:20; 14:11; 46:2; 62:2;
102:24; 103:23; 108:15; 112:4; 118:19;
125:10; 129:2; 150:13, 20; 157:13;
205:22; 249:20; 251:23; 256:5; 264:20;
269:17; 270:21; 278:16; 315:18
addressed [8] 16:1; 18:3; 91:1; 104:6;
106:13; 126:15; 174:6; 182:17
addresses [1] 4:12
addressing [7] 12:16; 49:14; 125:12;
134:17; 213:2; 218:18; 257:21
adds [1] 141:6
adequacy [1] 273:17
adequate [5] 16:3; 50:23; 193:11; 278:12;
308:25
adherence [1] 272:8
adhesive [1] 29:1
adjust [1] 302:19
administered [4] 106:23; 111:22; 201:22;
293:19
administration [2] 105:6, 13
admit [2] 103:17; 244:22
admittedly [1] 349:17
adolescents [1] 34:22
adults [6] 29:16; 30:15, 18; 34:23; 187:8
adverse [7] 109:8; 211:12, 13, 17, 20;
212:7, 16
advertise [1] 306:3
advised [2] 12:12; 81:16
advisor [1] 103:3
Advisory [12] 4:4; 8:16; 10:4, 8, 14; 11:1;
19:14; 43:1; 44:10, 19; 269:17; 350:19
advisory [1] 19:12
advocate [1] 149:12
affairs [1] 301:20
affinity [1] 254:14
afraid [1] 174:20
afternoon [3] 182:17; 184:6; 218:24
afterwards [1] 71:25
aged [1] 276:5
agency [8] 5:2, 18, 21; 79:19; 80:1;
81:16; 98:2; 155:9
agenda [4] 4:16; 6:14; 46:1; 182:21
agent [13] 82:14; 84:9; 161:2; 185:1;
187:3; 213:12, 13; 298:25; 303:10; 304:4;
347:9; 348:8
agents [7] 82:12; 93:22; 129:15; 155:21;
162:5; 171:23; 201:23
ager [2] 268:24; 269:4
ager-based [1] 268:16
ages [1] 66:23
agree [31] 65:7; 120:20; 132:13; 193:5;
246:2; 256:20; 263:25; 269:1; 289:7, 10;
290:7, 16; 291:10, 13; 292:3, 11, 23;
294:5; 301:15; 302:3, 6, 23; 305:16;
306:20; 307:17; 308:12; 319:22; 327:10;
337:6, 11; 339:15
agreed [2] 90:11; 179:19
agreeing [2] 246:10; 297:7
agreement [2] 194:9; 306:17
agrees [1] 60:6
aim [2] 299:19; 300:1
air [1] 24:22
al [1] 213:23
Alan [2] 7:23; 11:16

- alarm** [1] 255:9
alarming [1] 256:1
albeit [1] 257:1
Alex [1] 176:21
Alexandria [3] 220:12, 22; 341:22
Algorithm [1] 262:13
Allergy [1] 8:19
allow [6] 6:5; 20:4; 23:3, 5; 143:9; 272:22
allowed [3] 54:14; 82:3; 145:14
allowing [1] 112:3
allows [3] 50:20; 106:11; 272:25
allude [1] 153:22
alluded [6] 36:1; 65:20; 127:5; 140:4; 162:18; 176:21
alluding [1] 245:18
alone [4] 25:25; 154:23; 193:5; 227:5
alpha [1] 142:14
ALTAIE [12] 218:23; 232:8, 16, 20, 25; 233:9, 15, 19; 235:10; 249:20; 252:9, 21
Altaie [6] 218:22, 24; 231:22; 232:2; 251:22; 267:4
alteration [1] 266:23
altered [3] 31:7, 8; 176:7
alternative [1] 301:19
alternatives [1] 111:17
altogether [2] 228:13; 234:12
amazing [1] 94:10
ambiguity [1] 333:22
amenable [1] 320:20
America [1] 80:6
amount [21] 10:9, 20; 47:23; 49:5, 7; 52:18; 54:8; 86:12; 135:3; 136:7; 147:7; 173:8, 17, 25; 174:1; 179:11, 14; 185:9; 212:2; 338:22
amounts [1] 136:3
amoxi [16] 77:13, 25; 81:12; 97:21; 98:8, 15; 99:8, 18, 25; 100:5, 11, 15, 18, 20; 102:8
amoxicillin-clav [6] 220:18; 221:8, 14; 223:6; 229:15; 253:2
amoxicillin-clavulanate [3] 33:5; 164:5; 265:4
amoxicillin-clavulanic [1] 81:5
analogous [2] 105:1; 107:21
analyses [2] 148:17; 151:15
Analysis [1] 117:22
analysis [33] 13:17; 97:25; 99:12; 117:10; 125:7; 128:6; 134:13; 139:6; 163:13; 196:2, 3; 199:3, 4, 14; 201:8, 10, 12, 19; 202:12, 19; 203:2; 204:18; 206:2, 16; 207:21; 208:16; 210:14; 211:11; 237:21; 239:3; 248:14; 304:21; 325:8
analyze [3] 117:7; 170:21; 174:7
analyzed [1] 163:20
anatomic [1] 27:2
anatomical [1] 303:1
anatomy [1] 146:23
ancillary [1] 287:13
animal [22] 48:10; 50:12, 20; 51:7; 53:10; 56:21; 57:1, 13; 58:20; 79:14; 98:17; 100:22; 102:6; 178:2, 11; 219:13; 225:1, 2; 226:14; 247:18; 250:8; 300:6
animals [12] 50:3, 4; 52:24, 25; 53:15; 57:16; 141:3; 219:12; 223:18; 225:5, 14; 315:10
announcement [2] 4:12; 112:8
answer [42] 50:18; 51:23; 85:13; 113:18; 114:1; 118:18; 121:8, 24; 125:14, 23; 152:11, 12; 155:14; 156:19; 157:12; 160:18, 22, 24; 170:1; 178:4; 181:21, 22; 216:24; 238:11; 242:20; 243:8; 253:25; 254:21; 259:10; 268:25; 270:11; 276:9; 292:16; 299:3, 8, 11; 300:19; 312:23; 316:16; 320:24; 321:2; 333:15
answered [1] 50:9
answering [2] 181:20; 350:13
answers [3] 131:17; 138:10; 258:8
antecedent [1] 42:6
anti [2] 16:25; 184:25
anti-application [1] 187:16
Anti-infective [3] 7:10; 8:16; 11:1
Anti-infective [1] 4:4
anti-infective [5] 15:22; 187:3; 201:22; 311:15; 313:5
Anti-Infectives [2] 7:8; 15:17
anti-inflammatory [1] 109:14
antibiotic [45] 13:22; 14:21; 21:23; 34:5; 38:13; 41:11; 47:13, 14; 66:10; 67:2; 68:18, 19; 69:17, 24; 71:20; 74:1, 22; 104:11; 105:4; 107:19; 110:21; 111:17; 142:7; 144:13; 181:8; 246:13, 16; 247:19; 248:9; 249:4; 255:15; 277:10, 11; 282:10, 12; 294:1, 24; 319:6, 9; 321:1, 6; 339:13; 343:22
Antibiotics [1] 77:2
antibiotics [26] 22:4; 31:3, 24; 40:21; 47:16; 60:12, 18; 63:12; 74:7, 8; 76:14; 81:24; 82:2; 93:9; 109:12, 22; 111:19, 23; 140:9; 147:17; 149:7; 172:23; 200:18; 205:2; 248:23; 256:16
antigen [2] 66:13; 146:9
antigens [1] 141:15
antimicrobial [15] 21:3; 30:20; 37:16; 41:20; 46:25; 47:2, 7, 16; 129:15; 219:11; 220:1; 249:2, 6; 291:7; 306:4
antimicrobially [1] 34:19
antimicrobials [10] 35:1; 46:13, 24; 103:25; 107:3; 134:21; 171:22; 245:13; 247:15; 310:20
anxiety [1] 344:5
Anybody [1] 349:2
anybody [5] 76:4; 176:19; 249:16; 345:1; 349:3
anymore [1] 235:16
anywhere [6] 148:15; 223:2; 242:18; 254:12, 18; 319:8
AOM [18] 25:7; 26:6; 28:9, 12; 30:21; 92:7, 15; 93:8, 16; 96:14; 106:7; 139:3; 143:22; 144:1, 3, 9, 11; 322:10
apart [1] 250:2
apologize [5] 39:1; 91:3; 93:23; 153:22; 287:4
apparent [2] 41:23; 264:14
appear [4] 41:4, 6; 62:21; 177:16
appearance [4] 4:14, 22; 5:17; 75:3
appeared [3] 34:24; 36:15; 233:18
appears [9] 51:9, 25; 52:10; 54:8; 56:10; 59:14; 122:24; 250:14; 268:13
Applause [2] 11:4, 11
apples [1] 273:3
applicable [1] 314:13
application [12] 4:5; 9:24; 13:4; 45:7; 184:7, 15, 22; 187:25; 212:23; 218:11; 219:1; 252:10
applications [1] 9:25
applied [1] 338:23
apply [4] 261:21; 262:24; 326:1; 329:6
appreciate [7] 11:9; 43:5; 102:24; 150:11; 165:5; 270:20; 320:17
appreciation [2] 10:24; 11:8
approach [2] 191:17; 301:13
approaches [2] 12:16; 298:7
appropriate [14] 93:19; 110:5; 132:18; 217:10; 218:1; 266:17; 268:2; 281:1; 293:25; 333:13, 18; 340:4; 344:24, 25
approvability [1] 80:12
approval [3] 55:17; 247:1; 313:16
approved [19] 17:13; 43:19; 55:21; 87:14; 111:19; 184:12; 185:4, 11, 16, 19, 23; 187:4, 7, 12; 221:8; 247:15; 328:23; 336:21
Approximately [1] 153:13
approximately [17] 81:9, 11; 86:22; 196:10; 200:7, 8, 16, 20; 202:5, 24; 203:21, 24; 207:14; 209:7; 210:20; 224:14, 22
arbitrarily [1] 307:3
arbitrariness [1] 308:19
Archer [21] 7:14; 112:25; 118:12, 20, 24; 128:15; 134:15; 136:12; 144:15; 233:25; 249:10; 261:10; 282:23; 292:22, 25; 298:6; 300:3; 322:14; 330:11; 347:22; 348:15
area [7] 44:9; 49:4, 8; 145:5; 212:18; 271:17; 346:12
areas [3] 32:14, 15; 220:25
aren't [3] 124:6; 334:13; 349:17
argued [2] 202:10; 237:25
arisen [1] 11:22
arising [1] 317:14
arm [7] 157:4, 21; 158:7, 11, 22; 196:11
armamentarium [1] 187:2
armchair [1] 39:10
arms [3] 94:9; 152:20; 288:11
arrived [1] 81:8
arrow [1] 68:15
arrowed [1] 68:14
arrows [1] 68:12
art [1] 250:9
article [4] 32:11; 35:18; 40:24; 249:12
articles [2] 39:17; 152:15
articulate [1] 334:15
articulated [1] 337:2
ascribe [1] 297:2
aside [1] 308:24
asking [16] 20:8; 117:16; 149:20; 244:16; 258:18; 276:1, 9, 13; 281:10; 282:9; 283:13; 296:11; 312:9; 315:21; 321:17; 323:20
asks [1] 312:2
aspirin [1] 67:3
assay [3] 134:20; 135:2
assays [4] 134:19; 135:13; 142:25
assembled [2] 40:12; 71:18
assess [16] 44:22; 45:2; 75:2; 106:14; 206:5; 216:17; 217:5; 243:25; 270:5, 14; 279:10; 280:1, 14; 283:12, 13; 287:24
assessed [16] 196:1, 2; 199:2; 205:24; 206:8, 11, 14; 207:22; 208:15; 209:25; 210:8; 214:22; 237:4, 21; 238:4; 280:2
assessing [5] 44:16; 108:17; 245:13; 279:11; 281:2
assessment [31] 20:20; 127:25; 128:3; 199:10, 13; 201:6, 13, 20; 208:13; 215:20, 23; 216:9; 237:25; 243:16, 24; 245:6; 248:22; 260:11; 270:3; 272:7; 277:13, 14; 278:4; 279:23; 282:20; 285:16; 287:13, 14; 306:10; 320:6
assessments [4] 22:13; 108:6; 160:11; 270:4
assistance [3] 218:12; 307:22; 308:13
Associate [1] 77:1
alarm to Associate

associated [9] 27:19, 25; 31:14; 204:6; 211:23, 25; 224:8; 281:3; 296:18
assume [7] 152:6; 164:10, 14; 248:1; 256:17; 310:13; 341:19
assumed [1] 72:20
Assuming [1] 192:1
assuming [7] 134:18; 260:21; 265:19; 277:25; 278:23; 315:2; 342:7
assumption [1] 267:11
assurance [2] 268:22; 348:21
asterisk [1] 325:13
astronomical [2] 75:1; 159:1
atelectasis [1] 29:1
attempt [2] 19:8; 163:15
attempts [1] 99:22
attend [2] 30:11; 103:3
attendance [3] 92:21; 93:12; 95:15
attended [1] 197:19
attention [11] 32:22; 35:4; 62:23; 68:21; 76:24; 86:24; 188:19; 190:13; 191:20; 192:19; 193:12
attenuated [1] 178:13
attractive [1] 75:7
attributable [1] 309:25
audiologic [1] 108:6
aureus [1] 119:25
author [1] 108:24
authored [1] 17:5
available [16] 76:6; 78:13, 14; 110:22; 121:17, 18; 165:7; 172:12; 187:2; 194:13, 17; 196:19, 20; 208:2; 291:17; 349:12
Average [3] 89:21; 157:5, 17
average [17] 67:22; 83:13; 88:13, 14, 18; 89:7, 25; 90:14; 94:11, 12, 16, 25; 136:7; 145:20; 157:23; 189:21; 192:7
averaged [1] 309:18
avert [1] 328:9
avoid [1] 339:17
avoided [1] 307:8
aware [3] 6:16; 44:3; 336:10
axis [1] 64:10

- B -

bac-T [7] 184:19; 194:23; 212:15; 214:3; 241:9, 13; 291:19
Baccaro [1] 73:19
back-up [5] 118:6, 16; 133:6; 166:19; 240:12
background [6] 42:22; 77:9; 79:18; 154:22; 160:15; 304:17
backpedaling [1] 347:6
backwards [1] 258:16
bacteremia [1] 29:13
bacteremic [2] 30:6, 7
bacteria [30] 24:22; 26:1, 13; 27:9, 16; 52:23; 62:15; 66:2; 67:14; 73:15; 74:6; 75:6; 82:10, 13; 83:24; 113:24; 115:14; 141:15; 144:19; 244:6; 246:14, 17; 247:22; 248:12; 250:5; 277:8, 11; 278:1; 302:11; 306:24
bacterial [38] 25:7; 41:14, 16; 42:6; 45:3; 48:18, 22; 55:12; 61:3; 62:5, 25; 63:1; 64:5; 68:18; 74:21; 85:7; 91:9, 16; 105:2; 107:4, 21; 110:11; 126:17; 128:22; 146:21; 225:10; 227:10; 245:16, 19, 23; 246:6; 247:13, 16, 19, 21; 255:7; 260:22; 277:23
bacteriocidal [1] 47:4
Bacteriologic [1] 87:6
bacteriological [7] 113:3; 162:1; 227:4,

14; 251:24; 277:14, 18
bacteriologically [12] 42:10; 63:11; 67:20; 80:9, 13; 87:24; 96:20; 97:13; 98:13; 133:19; 257:24; 291:1
bacteriology [33] 83:21; 84:15; 88:2; 94:6; 96:5, 10; 136:13; 152:6; 156:17, 18; 157:5, 9, 24; 158:3; 162:4; 263:17; 273:22; 274:7, 10, 11, 20; 276:17, 19, 21, 23, 25; 277:17, 20; 278:6; 279:18; 280:3, 4; 293:13
bacterium [3] 301:2, 3
balance [3] 124:20; 252:19; 288:10
balking [1] 346:11
Baltimore [1] 7:25
bar [6] 68:10; 151:12; 154:17; 158:9; 169:4; 170:11
Barbara [2] 8:4; 319:22
barely [1] 151:3
barn [1] 75:23
barrier [2] 29:21; 140:9
bars [3] 35:5; 36:5; 160:17
Barth [8] 8:12; 176:13; 180:11; 246:2; 247:9, 24; 323:16; 349:23
base [2] 29:9; 328:19
Based [5] 4:16; 45:15; 181:16; 182:2; 322:15
based [49] 23:25; 59:22; 64:24; 70:1; 79:13; 81:12; 103:15; 105:15; 116:15; 123:21; 127:7, 15; 140:6; 141:7; 151:8; 185:8; 190:11; 195:24; 196:13; 201:12, 19; 202:12; 204:1; 205:23; 206:17; 210:14; 226:18; 232:6; 251:11; 257:7; 265:13; 266:22; 278:17; 280:10; 285:11; 299:16; 317:17; 320:5; 321:12; 325:8; 330:15; 332:7; 335:4, 6; 336:11; 337:18; 339:14; 340:25; 341:18
Basically [1] 255:12
basically [11] 91:3; 128:11; 165:22; 213:21; 215:14; 216:12; 235:20; 244:4; 265:24; 273:23; 346:16
basis [5] 98:3; 243:19; 257:8; 289:18; 307:5
beat [1] 234:1
beauties [1] 101:1
beautifully [1] 328:4
Beccaro [1] 24:16
becomes [6] 123:22; 175:24; 266:2; 281:14; 297:1; 299:2
becoming [1] 31:23
Beecham [3] 6:8, 9, 11
Beer-Sheva [1] 37:6
beg [1] 87:16
begins [2] 27:23; 29:19
behalf [1] 43:5
behave [2] 56:11; 138:9
behaves [1] 51:10
behind [2] 277:6; 348:14
belief [1] 61:24
believe [18] 6:4; 15:12; 24:3; 25:5, 6; 93:18; 104:3; 109:12; 144:11; 177:23; 229:18; 238:23; 249:21; 252:9; 253:25; 279:20; 285:15; 289:24
benchmarking [1] 151:23
beneficial [1] 109:13
benefit [1] 72:21
BESSER [4] 9:9; 117:4, 16; 280:25
Besser [3] 9:9; 117:3; 281:17
bet [1] 142:23
beta [3] 30:25; 135:25; 142:14
beta-lactam [4] 31:10; 47:16; 178:24;

179:16
beta-lactamase [38] 31:4; 45:18; 72:8, 9; 73:1, 9; 77:14; 78:3; 79:9; 101:1, 2, 6, 9, 10; 102:12; 110:19, 24; 119:17, 18, 19, 20, 21; 134:24; 135:7, 14, 25; 142:8, 17; 145:25; 176:1; 180:18, 22; 185:20; 186:11; 242:1, 5; 268:17; 314:25
beta-lactams [5] 46:11; 52:17; 54:15; 56:15; 269:4
Bicillin [1] 241:6
BID [1] 57:21
bigger [1] 161:22
biggest [4] 26:24; 89:10; 92:2; 205:15
bilateral [4] 124:18; 132:9, 19; 235:21
Bill [5] 104:3; 131:23; 140:8; 266:5; 347:24
bimodal [5] 220:18, 24; 229:8, 21; 231:11
bind [1] 128:21
binding [7] 31:8; 52:3; 132:2; 176:7; 254:14, 15; 266:22
Bio-Pharm [1] 7:13
biochemical [1] 72:8
biofilm [4] 249:13, 14, 21, 23
biologic [5] 71:8; 134:21; 135:2, 13, 23
biological [1] 78:2
biologically [2] 75:10, 15
biopharm [1] 188:7
biopharmaceutist [1] 188:2
biostatistician [1] 8:18
biotype [1] 73:1
biotyping [2] 72:8; 73:11
biphasic [1] 20:1
birthday [4] 24:2, 6, 8, 10
bit [22] 18:15; 23:19; 49:13; 54:8; 56:25; 79:18; 116:24; 120:19; 140:12; 150:12; 162:18; 184:17; 196:9; 198:8; 202:13; 203:4; 209:15, 18; 221:21; 227:1; 309:8; 326:25
blank [1] 227:9
blanket [2] 314:13; 344:5
blind [2] 18:18; 62:15
blood [4] 29:22; 34:7, 10; 51:8
blue [3] 58:16; 73:22; 74:17
board [4] 227:10; 246:13; 249:3, 5
Bob [1] 9:7
body [2] 46:19; 248:16
Book [1] 135:11
book [1] 172:3
bothering [1] 148:6
bound [16] 154:18; 217:18; 239:7, 8, 15; 271:4; 298:2; 300:22; 304:12; 305:1, 11, 13; 306:3, 6; 308:18; 324:7
boundaries [3] 330:18; 331:19; 332:2
boundary [3] 304:22; 309:1; 333:10
bounds [3] 154:24; 160:4; 305:17
bracket [1] 227:22
Branch [1] 9:10
break [10] 112:6; 124:23; 130:3; 183:1; 228:1; 250:2; 252:4; 262:17; 269:8; 316:22
breakdown [3] 166:20; 196:7; 200:19
breakpoint [50] 32:7; 33:1, 4; 58:23, 24, 25; 129:17, 20; 170:2, 3; 218:17; 219:15, 20; 221:11; 222:17, 25; 226:13; 227:21; 229:12, 23; 230:7, 23; 231:16; 232:21; 233:24; 265:9, 13; 271:20; 316:3, 4, 5, 10, 12, 17, 18, 23, 24; 317:3, 11, 13; 318:16; 319:20; 327:24; 332:5, 6; 339:8, 10, 11; 340:3, 8
breakpoints [41] 130:4; 219:3, 9, 10, 16, 25; 221:8, 15; 222:6; 223:14; 226:18, 21;

227:2; 228:7, 20; 229:10, 19; 230:20;
232:17; 251:25; 264:23; 265:7, 8, 15, 20,
21, 23; 266:10; 267:3; 268:5, 19; 271:18;
317:25; 318:5; 329:2, 5; 330:7; 335:5,
6; 336:10; 339:13
reath [1] 102:17
Brian [3] 76:25; 110:9; 122:24
brief [4] 80:3; 153:23; 219:6; 269:8
briefing [1] 123:19
Briefly [2] 63:10; 77:8
briefly [6] 77:16; 97:20; 153:22; 184:11;
196:5; 211:6
broad [3] 11:21; 295:2; 321:25
broadly [1] 28:7
broke [1] 119:7
broken [5] 203:7, 8; 211:2; 241:14;
314:14
broth [2] 24:18; 268:24
broth-based [1] 268:15
brother [1] 250:22
bug [6] 158:18; 293:25; 302:24; 307:8,
10; 309:10
bugs [1] 285:23
build [4] 87:17; 93:24; 152:16; 272:22
Building [1] 5:4
builds [1] 101:21
built [1] 263:2
bulging [10] 19:23; 25:16; 60:25; 116:23;
235:22, 25; 236:21, 23; 237:2, 7
bulk [2] 231:3; 325:25
bunch [1] 57:15
bureau [1] 6:8
buried [1] 37:1

- C -

C.N. [1] 112:9
calculate [6] 189:6, 9, 20, 24; 190:10;
194:2
calculated [6] 63:13; 147:15, 20; 191:8,
14; 225:10
calculating [1] 51:20
calculation [1] 227:17
calculations [1] 59:14
call [6] 32:22; 35:4; 86:24; 106:7; 163:16;
316:18
calling [1] 78:21
Cancer [1] 8:18
capsular [1] 72:5
Care [1] 9:7
care [32] 27:6; 30:11, 16; 31:21; 36:1, 10,
11, 18, 23, 24; 37:6, 15, 19; 38:2; 60:23;
75:1; 92:21; 93:12, 21; 95:15; 109:23;
116:3; 173:4; 181:8; 197:19; 200:20;
250:23; 255:15; 288:2; 296:25; 321:6;
343:19
cared [4] 30:12; 36:4, 6, 7
careful [3] 76:20; 138:16; 143:16
carefully [2] 69:23; 285:22
cares [1] 301:11
Carlin [3] 39:20; 91:4; 122:11
Carlo [1] 130:19
Carolina [1] 8:11
Carriage [1] 30:9
carriage [3] 38:1, 4; 117:6
carriers [1] 30:18
carries [1] 91:22
carrying [2] 37:22; 92:16
cartoon [1] 26:22
case [28] 16:5; 17:19, 21; 18:20; 19:21;
23:24; 29:24; 41:21; 66:20; 119:21; 129:5;

192:8; 208:2; 272:12; 275:7; 278:17, 20,
22; 280:19; 281:7; 298:1, 20; 304:7;
307:12; 309:20; 325:10; 326:21; 347:14
cases [39] 23:23; 24:12; 28:9, 12, 20;
29:11, 13; 30:3; 31:21; 36:23; 38:2; 41:18;
44:5; 63:6; 64:4, 5; 65:12, 18; 66:9; 80:10,
13; 81:3, 4; 97:17; 115:2; 124:18; 135:17;
207:25; 234:22; 248:25; 272:20; 310:21;
311:20; 328:13, 18; 349:10,
12, 24
cat [1] 242:5
catarrhalis [10] 18:11; 45:19; 78:5; 84:17;
92:3; 101:7; 185:22; 186:12; 203:24;
216:6
categories [1] 269:18
categorized [4] 25:17; 222:7, 18; 268:1
categorizing [1] 223:1
category [9] 93:12; 212:10; 245:12;
265:25; 269:5; 328:15; 334:25; 335:4, 5
causal [1] 71:11
causative [1] 187:9
caused [15] 5:8; 24:12; 25:20, 21; 45:17;
97:16, 17; 102:3; 110:19; 185:20; 186:11;
225:3; 310:22; 314:1, 24
caveat [4] 288:16; 307:19; 345:14; 349:23
caveats [2] 273:11; 287:25
CDC [5] 78:23; 111:7; 246:24; 247:10;
337:23
CDER [1] 188:3
ceases [1] 246:16
cefataxi [1] 266:8
cefotaxime [1] 48:12
cefepodoxime [1] 52:2
ceftriaxone [34] 88:4, 10; 89:1; 90:9;
95:21, 25; 108:11; 109:14; 111:21; 152:8;
153:25; 155:22; 156:11; 162:15; 163:5;
164:5; 166:12, 21, 24; 238:13, 22; 239:2,
11, 19, 25; 240:3, 9, 17, 23; 241:2, 14, 17;
266:7; 284:18
Celia [1] 7:20
cell [5] 31:7; 141:25; 142:9, 13
cells [9] 27:11; 28:12, 13, 14; 42:13;
141:6, 9; 204:21; 249:14
cellular [1] 27:1
Center [7] 4:19; 8:2, 14, 18; 9:2, 10;
188:3
center [5] 30:16; 36:7, 10; 38:2; 296:25
Centers [1] 9:11
centers [7] 31:21; 32:12; 36:19, 24; 37:6,
15; 197:4
Central [2] 32:16; 80:6
central [1] 137:19
century [1] 15:16
cephalosporin [2] 33:9; 52:15
cephalosporins [9] 33:8, 11, 14; 51:15,
17; 52:22; 53:8, 12; 54:9
cepholosporins [1] 268:18
certificate [2] 10:24; 11:7
cetera [5] 20:1; 69:4; 268:3, 23; 346:6
Chair [1] 7:14
chair [1] 7:21
Chairman [2] 42:25; 337:9
challenged [1] 170:11
chance [2] 67:7; 324:10
change [22] 17:8; 32:6; 35:1; 49:19;
52:11; 53:18; 58:9, 23; 107:11, 12;
124:19; 125:13; 132:3; 178:14; 258:8;
266:7; 306:1; 346:25; 347:2; 350:2, 3
changed [7] 21:12; 125:16, 20; 209:13;
266:7; 316:9, 12
changes [6] 177:13; 192:13; 227:19;

252:1; 265:19; 285:13
changing [2] 73:7; 286:5
characteristic [2] 192:21; 193:12
characteristics [4] 15:7; 181:25; 188:20;
289:14
characterize [1] 289:25
characterized [1] 306:9
Charleston [1] 8:11
chart [1] 64:16
check [2] 167:14, 22
chemical [1] 134:20
chemoprophylaxis [2] 37:25; 38:6
chemotherapy [1] 129:15
CHESNEY [21] 7:17; 143:5; 238:10;
255:2; 256:8; 284:7; 292:19; 293:17;
299:11; 309:5, 21; 322:20; 323:2, 5;
330:10; 333:25; 335:14, 25; 336:4, 14;
343:14
Chesney [15] 7:17; 143:4; 238:9; 245:1;
255:1; 284:6; 292:18; 293:16; 299:10;
309:4; 322:19; 330:9; 335:13; 337:1;
343:9
Chicago [1] 9:6
Chief [3] 8:7, 19; 46:3
child [20] 16:6; 20:2; 22:20; 27:6; 30:11;
31:21; 34:18; 36:1, 10, 11; 37:18; 60:22;
61:8; 72:24; 116:12; 181:3; 261:24; 274:2;
301:25; 305:18
Children [2] 8:20; 92:20
chinchilla [3] 142:11; 177:20; 247:22
choice [2] 79:11; 341:7
choices [1] 78:14
cholesteatoma [1] 29:1
chose [2] 133:22; 204:14
chosen [3] 133:23; 304:12; 327:23
Chris [1] 9:13
CHRISTIE [1] 7:20
Christie [6] 7:20; 132:5; 292:10; 293:22;
299:15; 323:6
CHRISTIE-SAMUELS [8] 132:7, 20;
284:8; 292:11; 293:23; 299:16; 323:7;
330:6
Christopher [1] 6:3
chromatographic [1] 134:19
chronic [14] 28:1, 9, 20; 29:3; 41:18;
143:7, 14, 23; 144:4, 7, 12, 14; 285:12
chunk [1] 334:24
circles [1] 55:13
circulation [1] 74:9
cited [1] 143:19
claim [4] 16:24; 110:22; 175:1; 275:3
claims [1] 23:25
clarification [8] 232:1; 256:6, 13; 264:21;
317:6; 318:11; 319:19; 341:15
clarify [5] 233:20; 236:7; 320:16; 321:16;
324:24
class [4] 51:13; 167:1; 169:5; 246:3
classed [1] 166:16
classes [6] 31:24; 35:8; 78:13; 268:13;
290:3; 291:7
classic [1] 137:13
clavulanate [17] 4:6; 6:12; 43:11; 135:5;
173:20; 176:16, 20, 22; 178:22; 180:21;
185:2, 7, 9, 10, 14; 186:5; 211:25
clavulanic [10] 78:22; 79:7; 128:19;
175:12, 18; 176:6; 179:3, 9, 16, 22
cleaning [1] 285:22
clear [10] 68:22; 106:15; 132:10; 226:11;
298:15; 320:24; 330:14; 335:17; 337:14
clearance [6] 141:18; 142:18; 177:24;
180:20, 23; 227:10

breath to clearance

- cleared [1] 74:8
 cleft [1] 343:18
 Cleveland [6] 39:20; 62:11; 64:21; 67:21; 71:18; 91:5
 Clin [1] 37:9
 clindamycin [3] 33:21; 38:1, 10
 Clinic [1] 8:18
 clinic [1] 345:7
 Clinical [7] 8:13; 36:15; 38:17; 77:1; 110:14; 157:15; 213:24
 clinically [18] 14:25; 41:4, 7; 64:6; 75:15; 86:11; 95:9; 116:13; 133:18; 144:10; 195:21; 214:22; 215:6; 217:11; 230:21; 234:16; 245:6; 293:10
 clinician [4] 179:23; 181:3, 14; 182:3
 clinicians [1] 28:4
 clonal [1] 121:14
 clone [2] 36:22; 37:17
 clones [3] 31:22; 37:10, 13
 closer [1] 24:3
 clumps [1] 250:4
 co-investigator [2] 5:10; 6:11
 COCCHETTO [14] 42:24; 124:22; 125:9; 150:8; 151:17; 156:3; 164:10, 13; 165:5; 169:12, 23; 181:20; 182:7; 320:15
 Cocchetto [4] 42:23; 43:2; 150:7; 169:11
 coded [1] 117:23
 Colin [5] 39:19; 107:10; 108:18; 145:17; 161:8
 collapses [1] 49:10
 colleague [1] 307:17
 colleagues [3] 73:19; 76:16; 86:16
 collect [2] 50:23; 291:3
 collected [5] 32:13; 37:7; 189:18; 190:6; 274:20
 collection [1] 84:13
 College [1] 7:16
 Colleges [1] 9:5
 colonization [2] 116:4; 282:16
 colonizations [1] 261:6
 colonize [1] 29:20
 colonized [2] 13:10; 296:24
 colony [1] 250:4
 color [4] 151:2; 170:11, 16
 column [2] 32:24; 66:1
 combination [11] 49:12; 111:2; 179:17; 184:25; 217:12; 241:5; 252:5; 270:19; 278:19; 337:24; 338:21
 combined [3] 46:16; 58:20; 167:23
 comer [2] 245:7; 276:3
 comers [45] 13:1, 3, 5; 21:14, 25; 96:14, 16; 145:14; 195:8; 216:25; 217:16; 257:21; 258:12; 260:1, 7; 270:12, 23; 271:3, 25; 273:9, 20; 274:5, 6, 11, 18; 276:5, 10, 12, 22, 23; 288:8; 289:3; 290:17; 291:24; 292:5, 17, 21; 301:24, 25; 302:9, 19; 306:13; 326:24; 338:10
 comfortable [10] 141:7; 330:20; 332:4, 24; 336:5; 341:5; 342:11, 17; 344:10, 13
 coming [19] 7:4; 23:24; 39:2; 149:22; 219:17; 220:12, 22, 25; 225:12; 247:5; 253:9; 261:25; 281:10; 286:1; 300:19; 334:8; 336:5; 339:10; 345:11
 comment [34] 6:22; 10:7; 25:15; 33:6; 104:5; 126:4, 6; 129:12; 130:23; 135:9; 139:13; 150:9; 151:10; 158:24; 161:8; 171:23; 176:19; 179:12, 25; 247:17; 253:22; 255:2, 4; 257:11; 260:18; 264:6; 275:20; 305:16; 314:7; 337:4, 6, 22; 343:21; 349:7
 commentary [1] 243:21
 Comments [1] 280:23
 comments [10] 6:6; 38:12; 103:13; 127:13; 145:8; 182:20, 22; 272:1; 342:12
 commitment [2] 10:10, 12
 Committee [13] 4:5; 8:16; 10:5, 8, 14; 11:1; 19:14; 43:1; 44:10, 20; 46:8; 269:17; 350:20
 committees [3] 12:12; 19:12; 244:18
 common [11] 82:6; 92:8, 14, 15; 94:21; 102:12, 13; 107:25; 146:2; 212:17; 263:14
 commonly [1] 61:14
 Commonwealth [1] 7:16
 communicated [1] 127:14
 community [7] 36:18, 20, 25; 37:14, 17; 79:5; 187:7
 companies [1] 103:6
 company [3] 43:5; 323:23; 334:4
 comparable [6] 148:1; 150:2; 180:5; 196:7, 15; 238:15
 comparative [27] 17:12; 18:17; 19:20; 69:16; 75:2; 157:3, 14, 17; 158:2, 6; 159:13, 17, 18; 161:3; 176:9; 194:22; 195:3; 239:17; 275:5; 276:2; 288:6, 7, 21; 290:19; 303:16; 304:5; 307:14
 comparator [20] 90:2; 147:20; 152:9, 20; 155:20; 156:15; 160:10; 240:23; 241:7; 286:13; 287:1, 17; 289:11, 17; 291:16, 19; 308:25; 312:10, 13
 comparators [3] 147:17; 149:9; 150:1
 compare [9] 66:9; 86:8; 87:14; 90:4; 177:20; 191:6; 277:25; 281:15; 290:2
 compared [25] 36:20; 47:21; 57:3; 63:23; 66:22; 71:9; 93:22; 95:12, 23; 96:9, 16; 119:15; 155:25; 172:4; 187:22; 191:14; 217:15; 225:22; 238:21; 239:19; 255:10; 271:3; 297:24; 302:13; 303:9
 Comparing [1] 200:11
 comparing [4] 45:11; 167:16; 240:19; 287:20
 comparison [7] 157:1; 158:1, 5, 20; 191:1; 273:1; 288:9
 comparisons [7] 126:14; 147:16; 149:7, 19; 156:8, 23; 164:21
 compilation [2] 39:19; 40:4
 compilations [1] 156:23
 complete [7] 11:13, 14; 50:3; 139:9; 145:1; 203:14; 306:17
 completed [1] 105:11
 completely [3] 116:5; 289:20; 290:4
 completing [1] 38:4
 completion [4] 19:5; 87:22; 172:9; 289:8
 complex [2] 150:12; 308:22
 compliance [1] 148:21
 compliant [1] 175:13
 complicate [2] 277:16; 285:14
 complicated [2] 69:6; 262:13
 complicating [3] 36:4; 41:18; 144:12
 complications [5] 27:25; 28:23; 292:7, 8; 328:9
 comply [1] 148:22
 component [5] 43:18; 78:22; 150:15; 178:24; 271:15
 components [2] 142:1, 4
 compound [11] 61:14; 175:10; 304:9; 310:17; 323:1; 328:6, 23; 329:2; 340:16; 345:25; 346:8
 compounds [3] 155:22; 164:20; 169:4
 conceivable [1] 287:19
 conceive [1] 175:24
 concentrate [1] 189:8
 concentration [25] 46:22; 47:3, 4; 131:25; 175:11; 177:10; 189:2, 7, 17, 18, 21, 23; 190:3, 4, 8, 20, 21; 191:7, 8; 193:19, 24; 194:1, 8
 concentrations [31] 16:13; 31:3, 10; 46:18, 19; 47:10, 20, 21; 48:3; 59:13; 74:5; 75:13; 104:10, 13, 17, 21; 105:13; 130:13; 132:2; 135:13, 18; 140:10, 22; 143:1; 189:14; 190:18; 191:3, 10, 11; 193:21; 267:15
 concept [5] 75:15, 16; 249:17, 19; 267:25
 concern [7] 5:21; 43:24; 169:13; 175:1; 246:25; 270:2; 300:4
 concerned [4] 46:14, 22; 172:6; 323:9
 Concerning [1] 132:8
 concerns [2] 224:6; 294:14
 concert [1] 330:16
 conclude [2] 71:6, 11
 concluded [2] 86:19; 350:20
 concluding [1] 90:10
 conclusion [7] 41:9; 97:14; 169:9; 194:6; 244:14; 334:9; 340:7
 Conclusions [2] 100:15; 101:25
 conclusions [5] 56:13; 77:18; 159:3; 169:1; 214:12
 concomitant [4] 44:3; 106:6, 8; 134:24
 concur [1] 295:23
 concurred [2] 348:11, 16
 concurrent [1] 42:4
 concurrently [1] 288:3
 conduct [1] 278:25
 conducted [4] 45:9; 80:5; 197:5; 275:13
 Confidence [1] 151:7
 confirm [1] 219:16
 confirmation [1] 106:20
 confirmed [3] 80:9; 115:1; 181:24
 conflict [3] 4:12, 22; 5:18
 confounded [2] 278:5, 7
 confounder [1] 285:8
 confounders [1] 14:15
 confounding [4] 14:3; 255:24; 281:4; 293:8
 confused [2] 278:3; 291:4
 confusing [7] 291:18; 317:8; 335:15; 336:15; 337:7; 339:17
 confusion [4] 317:13; 336:5; 337:18; 339:6
 congratulated [1] 168:14
 conjugate [3] 31:18; 35:16, 23
 consecutive [1] 212:6
 consensus [5] 111:8; 296:16; 297:4, 5; 333:23
 consequently [2] 328:15; 332:1
 conservative [2] 202:13; 238:1
 consider [11] 4:5; 14:7; 17:6; 18:14; 20:8; 60:16; 61:17; 139:23; 311:11, 24; 316:6
 considerable [1] 300:6
 considerably [1] 33:23
 consideration [10] 165:4; 173:22; 204:23; 216:3; 217:20; 218:4; 271:6; 298:4, 17; 315:17
 considered [26] 18:23; 21:1; 82:13; 83:4; 124:4, 6, 7; 133:25; 166:16; 167:1, 4; 201:9, 19; 202:15; 206:7; 215:6; 233:23; 238:6; 293:21; 305:15; 320:19; 321:23; 335:12; 346:2; 349:21
 considering [3] 208:20; 215:4; 231:11
 consistency [4] 222:9; 224:18; 268:9, 22
 consistent [8] 84:19; 100:21; 138:1; 166:7; 201:14; 221:12; 267:24; 269:6
 consistently [5] 86:5; 133:24; 153:7;

222:4; 253:10
consists [2] 185:1, 12
constitute [1] 5:15
constituted [1] 43:15
constitutes [1] 334:23
consultant [2] 6:9; 11:15
consultants [4] 43:1; 112:20; 281:19; 282:2
consultation [1] 81:15
consumer [2] 11:6; 272:17
contacted [1] 195:17
contacts [1] 195:16
contained [2] 35:15; 165:23
containing [1] 24:20
contains [2] 43:10; 185:6
contemporary [1] 84:9
context [3] 249:2; 255:18; 267:14
continue [3] 23:15; 99:6; 260:12
continued [9] 82:24, 25; 86:15; 87:10; 94:22; 95:11; 98:14; 99:16; 101:4
continues [3] 28:11; 42:12, 13
continuing [1] 27:20
continuum [3] 27:22; 29:4; 143:25
contrast [2] 26:12; 31:5
contributed [1] 92:9
contributing [1] 66:16
contributions [1] 350:13
Control [1] 9:11
control [7] 57:16; 76:13; 204:11; 205:1, 16; 225:6, 22
controlled [8] 16:3; 23:3; 66:21; 69:24; 213:18; 214:3; 278:13; 280:20
convenient [1] 328:23
conventionally [1] 248:22
conversation [2] 109:2; 345:21
converse [1] 14:23
convert [1] 178:10
convince [1] 326:7
convinced [2] 316:16; 326:5
Copenhagen [1] 66:21
copy [1] 5:1
correctly [1] 181:22
correlate [3] 75:8; 300:7, 17
correlates [1] 61:20
correlating [1] 48:8
correlation [10] 56:18; 62:24; 68:23; 92:24; 93:2; 106:16; 108:14; 129:8; 140:24; 162:25
correlations [3] 69:8, 9; 104:24
corresponded [1] 123:5
correspondence [1] 62:18
corresponding [1] 63:13
corroborate [1] 224:17
corroborated [1] 140:7
cost [1] 307:9
counting [1] 221:7
country [3] 32:17; 265:2; 267:6
counts [3] 146:21; 225:9, 10
couple [24] 32:10; 38:12; 40:13; 45:9; 60:15; 62:9; 69:7; 125:1; 129:24; 130:15; 137:10; 143:5, 17; 145:15; 149:17; 166:15, 22; 213:19; 233:17; 243:11, 24; 262:7; 317:17; 325:17
course [26] 29:8; 30:20; 36:11; 39:11; 46:17, 19, 20, 25; 47:7, 9; 70:20; 82:16; 116:12; 158:15; 165:14; 168:17; 197:7; 35:20; 239:20; 240:4; 256:2; 290:1; 298:1; 307:11; 311:10; 312:12
courses [4] 22:3; 68:13; 109:22; 145:5
courtesy [1] 63:22
cover [4] 154:14; 179:3; 315:6; 344:11

covered [3] 35:15, 23; 314:9
CR [1] 241:6
CRAIG [11] 46:8; 130:23; 132:1; 140:20; 144:22; 246:22; 260:17; 266:6; 337:23; 338:20; 349:8
Craig [20] 46:3, 7; 75:12; 79:13, 15; 98:17; 104:3, 24; 106:13; 140:2; 144:16; 246:10; 255:6; 260:15; 264:24; 268:6; 337:21; 342:15; 347:24; 349:6
create [2] 5:17; 308:3
Criteria [1] 116:9
criteria [22] 13:17, 19; 18:21; 19:11; 21:13; 22:1; 70:1; 113:6; 116:7, 18, 20, 21; 140:15; 238:5; 252:1; 261:22; 273:16; 290:20; 333:2; 335:23, 24; 339:24
criterion [1] 262:23
Critical [1] 9:7
critical [3] 20:9; 107:5; 112:19
criticism [1] 257:14
criticisms [1] 257:17
critique [1] 150:4
CROSS [12] 7:23; 141:13; 142:19; 284:13; 292:3; 294:5; 300:3; 312:18; 323:9; 325:1, 7; 330:5
Cross [13] 7:23; 11:16; 140:1; 141:12; 284:12; 292:2; 294:4; 300:2; 310:10; 312:15; 313:2; 323:8; 324:24
cross [2] 29:21; 239:8
crux [1] 26:23
CSF [3] 34:7, 11; 142:10
culture [21] 16:24; 21:2; 24:22; 83:23; 108:1, 3, 13; 136:1; 139:15, 24; 208:12; 236:4, 14; 237:3, 16; 246:15; 248:17; 250:1, 3; 251:11; 262:19
cultured [1] 136:15
cultures [9] 24:18, 22; 135:3, 6, 12; 145:11; 227:6; 236:17; 272:21
cumulation [1] 104:14
cured [1] 304:14
cures [4] 65:3; 167:4; 237:19; 291:23
curious [3] 93:22; 232:14; 233:8
current [19] 6:21; 103:7; 175:16; 194:16; 221:8, 14; 229:9; 252:7; 264:22; 265:12; 271:18; 275:1; 316:5; 322:12; 330:16; 333:1; 335:23, 24; 348:19
currently [20] 21:23; 43:12, 18; 78:9; 87:14; 101:19; 102:16; 172:11; 185:18, 23; 187:2, 4; 220:6; 318:6; 321:22; 329:1; 332:5; 336:11; 339:24; 340:15
curve [10] 49:4, 8; 53:22; 58:16; 67:16; 189:8; 190:10, 12; 213:8; 302:15
cusps [5] 130:12, 16; 140:5, 13; 273:11
cutoff [2] 194:5; 341:23
cytokine [2] 142:24; 143:2
cytokines [1] 27:13
cytosolic [1] 142:4

- D -

Dagan [7] 40:12; 55:1; 64:23; 74:12; 106:19; 251:2; 263:22
Dallas [1] 111:12
Daly [2] 143:18; 144:4
damage [1] 29:2
DANNER [9] 9:7; 11:3; 286:24; 287:15; 288:4; 297:18; 308:17; 327:14; 329:16
Danner [10] 9:7; 10:23, 25; 282:3; 286:23; 287:11; 297:17; 309:3; 327:13; 329:15
darker [2] 170:15, 16
database [3] 260:13; 272:23; 323:15
date [6] 30:5; 91:15; 113:5; 273:7;

294:15; 337:19
dates [1] 120:17
David [3] 8:10; 42:23; 43:2
dead [1] 234:1
deal [3] 62:1; 107:14; 269:9
dealing [6] 51:24; 162:7; 245:24; 301:7, 8; 342:2
dealt [1] 315:13
deaths [2] 211:9; 212:15
debris [1] 27:1
decade [5] 19:7; 28:6; 31:7; 36:2; 39:3
decades [3] 12:15; 30:23; 32:1
December [2] 130:25; 195:5
decided [1] 258:4
deciding [1] 243:6
decision [1] 103:11
declared [3] 123:4; 124:3; 133:18
decrease [2] 30:12; 60:2
decreased [6] 61:7; 100:12; 236:21, 22; 237:2, 15
decreasing [3] 40:17; 109:9; 226:5
deducts [1] 219:15
deep [1] 102:17
defense [1] 41:3
defenses [2] 29:21, 25
defer [1] 299:9
deficiency [1] 41:21
define [2] 274:7; 331:14
defined [14] 16:8; 20:13; 24:7; 45:21; 92:17; 198:23; 212:11, 18; 237:22; 243:24; 317:9; 322:11; 342:17; 347:9
defining [1] 294:14
definite [1] 244:18
definition [21] 16:5; 17:19, 21; 18:20; 19:21; 201:14; 207:8; 212:4, 10; 238:4; 274:9; 275:7; 278:17, 20, 23; 280:19; 295:3; 298:1; 301:24; 302:2; 313:19
definitions [3] 23:24; 64:24; 237:22
degree [3] 54:10; 68:8; 331:20
Del [2] 24:16; 73:19
delayed [1] 285:14
deliberations [2] 5:24; 217:18
delineate [1] 156:7
delineated [3] 165:2; 265:7; 336:12
delineating [1] 266:15
delineation [2] 330:14; 346:5
delivery [1] 43:16
delve [1] 10:2
demographic [1] 291:25
demographically [1] 301:11
demographics [6] 83:16; 196:6; 200:6; 256:15; 289:13; 301:8
demonstrate [3] 56:18; 79:21; 246:18
demonstrated [10] 77:21; 97:18; 102:1; 104:2; 105:10; 174:10; 198:11; 199:25; 249:25; 341:7
demonstrating [1] 196:16
demonstration [1] 208:11
departing [1] 10:22
Department [1] 9:8
depend [1] 245:12
depended [2] 169:6; 190:3
dependent [4] 47:18, 24; 246:3; 307:12
Depending [1] 263:8
depending [6] 145:2; 160:23; 223:3; 262:18; 267:19; 287:19
depends [1] 318:4
derived [1] 81:10
describe [2] 87:18; 290:1
described [5] 43:23; 63:9; 80:4; 313:9; 343:1

consists to described

- describing** [3] 40:25; 47:9; 289:20
description [1] 195:9
descriptions [1] 159:14
descriptive [4] 161:2; 162:2; 164:20; 176:10
deserve [1] 33:6
design [21] 11:22; 15:7; 22:8, 23; 44:16, 25; 63:20; 76:17; 77:9; 80:3; 112:19; 132:8, 13; 145:12; 175:19; 249:6; 270:3, 23; 275:9; 309:2; 313:7
designation [1] 281:20
designed [10] 79:20; 84:9; 97:24; 98:18; 132:11, 16; 155:6; 158:22; 170:3, 21
designs [1] 79:24
desirable [1] 16:12
desired [1] 175:11
Despite [1] 104:20
despite [5] 62:19; 67:2; 99:22; 108:13; 345:20
detail [4] 198:8; 254:5, 21; 350:14
detailed [1] 182:14
detectable [1] 136:8
detected [1] 144:8
detecting [1] 161:23
detection [4] 66:13, 14; 248:3, 18
determinant [1] 56:14
determine [7] 12:9, 22; 46:17, 18; 65:15; 106:13; 194:11
determined [9] 4:18; 5:18; 65:1; 84:25; 85:8; 116:10, 16; 189:3; 194:1
determining [2] 306:11, 16
Detroit [1] 9:18
develop [7] 12:1, 13; 24:9; 44:21; 181:12; 260:5; 275:3
developed [5] 12:4; 15:17; 43:21; 78:10; 86:14
developing [1] 19:10
development [3] 103:4, 25; 109:10
devil [1] 149:11
diagnose [1] 61:2
diagnosed [1] 66:9
diagnosing [1] 106:2
diagnosis [6] 19:18; 64:2; 73:16; 172:6, 7; 285:14
diagram [2] 68:6; 149:25
dialogue [1] 147:11
diameters [1] 350:3
Dianne [2] 7:1; 334:11
Diarrhea [1] 212:17
diarrhea [11] 134:12; 175:14; 211:13, 18, 23, 25; 212:1, 3, 4, 7, 11
differ [2] 288:1; 310:3
differed [1] 195:25
difference [48] 13:1, 6; 25:23, 24; 33:6, 9; 36:8; 37:11; 39:13, 14; 40:19; 51:19, 25; 67:1, 8; 70:17, 19, 24; 71:1, 2; 128:2; 129:3, 20, 22; 145:12; 155:13; 159:7; 161:21, 24; 165:1; 199:1, 11; 205:5, 10, 14, 15; 222:24; 225:14; 226:1; 252:19; 269:3; 273:10; 276:10; 280:17; 286:13; 310:1; 311:22; 331:24
differences [16] 51:13; 143:24; 158:25; 159:9; 160:2, 4; 161:24; 164:19; 173:6; 254:19; 284:20; 297:20; 309:24; 311:19, 24
differentiate [1] 261:16
differentiated [2] 122:7; 163:10
differently [2] 69:20; 235:14
difficult [11] 50:22; 226:10; 278:12; 287:2; 290:18; 297:1; 299:3; 307:15; 308:18; 319:4; 350:17
difficulties [1] 245:10
difficulty [8] 14:3; 106:2; 110:1; 142:24; 213:9; 225:24, 25; 300:17
Dikoe [3] 7:10; 188:6; 194:19
dilemmas [1] 340:15
dilution [6] 140:14; 252:19; 253:17, 19; 269:4
dime [1] 283:9
direct [5] 156:7, 22, 25; 157:1; 164:20
directed [1] 164:14
Director [7] 7:1, 7; 8:4, 13, 25; 9:1; 77:1
disagree [2] 146:6; 349:2
disagreement [3] 191:10, 15, 18
disappearance [1] 172:15
disarranging [1] 319:23
disclose [2] 5:5; 6:7
disclosure [1] 102:25
discomfort [1] 333:9
disconnect [6] 14:1; 90:13; 123:22; 124:12; 153:20; 170:10
discordant [2] 119:19; 133:13
discouraged [1] 334:7
discrepancies [2] 235:13; 323:10
discrepancy [4] 14:8, 17; 123:13, 14
discriminate [1] 291:1
discuss [23] 9:23; 77:8, 17; 97:20; 102:20; 184:11, 14, 17; 187:17; 194:21; 201:5; 207:4; 211:7; 217:3; 219:7; 228:7; 229:22; 231:23; 235:12; 252:23; 271:17, 20; 339:20
discussed [20] 38:19, 21; 44:25; 76:18; 79:13; 80:1; 86:9; 87:7; 101:21; 109:18; 155:6; 198:25; 205:20; 213:19, 20; 232:16; 243:10, 20; 268:7; 328:21
discussing [5] 100:25; 168:18; 204:14; 246:23; 255:7
Discussion [1] 271:23
discussions [11] 5:24; 6:13; 42:20; 79:19; 126:24; 216:8; 217:17; 231:24; 245:10; 255:5; 257:20
Disease [10] 7:15, 19; 9:1, 11; 36:16; 37:9; 46:4; 106:18, 21; 111:9
disease [36] 25:14, 20, 21; 26:6; 27:22; 28:6; 29:4, 15; 30:6; 34:13, 14; 39:9, 14; 41:18; 66:8; 87:5; 103:17; 105:8; 106:4; 109:7, 20; 110:7; 112:1; 124:16, 17; 132:9; 143:25; 217:21; 263:14; 271:7; 290:1; 298:5, 13; 300:5; 311:20; 312:2
Diseases [10] 7:24; 8:2, 5, 8, 13, 20; 9:10, 11, 15, 17
diseases [3] 7:22; 8:23; 29:10
disfunction [1] 282:15
disparity [1] 128:17
dispute [2] 61:11; 228:19
distinction [1] 276:11
distinctly [1] 247:11
distinguish [1] 72:10
distinguished [2] 10:25; 11:8
distributed [1] 252:14
distribution [27] 41:17; 46:15; 136:10, 18; 177:13; 190:23; 192:13, 18, 20, 21, 22, 23; 193:13, 14; 194:13; 206:18; 220:15, 16, 19, 24; 221:3, 5; 229:7, 8, 21; 231:12
distributions [6] 188:22; 190:16; 254:1; 334:23; 341:21; 349:16
dive [1] 31:12
divide [1] 69:25
divided [4] 46:14; 173:10, 12; 328:7
Division [10] 7:7, 8, 10, 15, 18, 23; 8:12; 9:16; 15:17; 77:2
division [2] 17:5; 19:8
doctor [2] 272:18; 312:2
document [15] 15:23; 17:6; 18:15; 19:11; 20:21; 243:10, 20; 244:2; 265:1; 266:14; 270:21, 24; 275:2, 19; 329:6
documentation [2] 19:24; 146:13
documented [9] 21:1; 120:5, 18; 181:17; 218:5; 279:1; 338:12, 19; 342:8
documents [5] 57:12; 265:12; 318:6; 330:17; 336:13
doesn't [18] 18:21; 126:10; 144:14; 164:25; 166:4, 9; 215:10; 222:5, 16; 225:19; 248:4; 254:20, 21; 279:23; 299:18; 303:10; 305:20; 332:16
dog [1] 155:4
dosage [21] 43:16, 18; 46:17; 48:5, 16, 19; 57:20, 25; 58:4; 79:4, 10; 105:5, 12; 110:4, 18; 111:10, 14, 17; 268:3; 349:20, 22
dosages [1] 55:22
dosed [3] 55:21; 80:7; 186:5
doses [7] 52:5; 136:6; 173:10, 12; 266:17; 267:24; 328:8
dosing [17] 51:2, 3, 5; 52:18; 53:9; 57:3; 58:19; 144:21; 177:3; 223:24; 224:2, 12, 14; 265:6; 303:2; 328:24
dotted [1] 48:21
double [25] 18:18; 54:13, 16, 21; 55:7; 62:10; 64:1; 105:22, 23; 106:10, 11; 107:7; 175:12, 14, 20; 180:11, 14; 197:10; 247:2; 251:8, 17; 255:5; 257:23; 261:8; 334:5
doubled [2] 189:7, 8
doubling [5] 58:16; 173:20; 175:9; 191:3; 193:20
doubt [1] 72:21
dozen [2] 103:5; 135:22
draft [1] 243:23
drainage [1] 146:8
dramatic [1] 38:3
dramatically [2] 348:20; 350:8
drastically [1] 228:3
draw [3] 62:23; 196:21; 214:12
drawn [1] 160:16
drew [2] 52:11; 68:21
driving [1] 326:23
drop [6] 58:7; 83:25; 97:8, 9; 228:3; 326:8
dropped [1] 163:12
drops [2] 92:3; 228:24
Drs [4] 75:11; 232:2; 306:18; 339:19
DRSP [4] 22:5, 7; 23:17; 143:22
Drug [6] 4:20; 7:11; 188:3; 312:10, 11
drug-organism [1] 49:12
Drugs [2] 8:16; 11:1
drugs [38] 15:22; 17:1; 19:10; 31:10; 35:7; 41:1, 4; 46:16; 47:18, 25; 48:6; 51:12, 16; 52:2; 55:17, 21; 63:15; 64:18; 66:4; 74:3; 87:15; 103:14, 20; 142:17; 146:14, 20; 247:2; 266:9; 272:18; 281:15; 287:19; 289:5; 290:3; 299:20; 313:5; 321:22
drum [1] 116:24
dry [2] 91:8; 107:18
due [14] 44:23; 79:23; 110:16; 187:4; 213:11, 14; 216:5; 217:25; 264:16, 17; 271:14; 309:25; 315:24; 321:13
dug [1] 213:21
Duke [1] 8:14
dumped [1] 148:16
duration [2] 48:6; 144:19
dynamics [1] 350:1

dysfunction [2] 26:25; 27:3

- E -

eardrum [1] 61:1
eardrums [1] 25:16
early [13] 27:12; 35:13; 61:19; 67:6; 71:19; 74:2; 75:21; 79:16; 107:23; 206:11; 238:4; 251:19; 295:24
ears [6] 40:11; 132:18, 21; 133:24; 134:11; 235:21
easier [2] 279:1; 291:15
easily [1] 271:24
easy [4] 151:4, 15; 175:15; 248:4
EBERT [9] 8:22; 134:16; 268:12; 286:10; 289:23; 297:10; 306:8; 327:2; 329:19
Ebert [10] 8:22; 11:17; 134:15; 268:11; 282:2; 286:9; 289:22; 297:9; 306:7; 327:1
ecstatic [1] 345:7
edition [1] 265:18
educate [1] 337:18
educated [1] 259:22
education [2] 258:23; 313:13
effect [39] 14:11; 38:1; 46:23; 47:10, 13; 49:6; 58:6; 74:22; 87:7; 106:25; 107:4; 109:8, 9, 13; 141:5, 15; 142:7; 144:14; 159:5; 161:9, 15; 171:21; 176:6, 16, 20, 22, 24; 177:3; 178:23; 231:4; 247:19; 266:18; 272:7, 11; 282:12; 298:9; 309:25; 318:25
effective [14] 12:10; 38:6; 41:4; 110:19, 23; 111:17, 24; 159:10; 180:15; 299:1; 311:6, 12; 345:13; 348:9
effectively [2] 344:23; 346:21
effectiveness [7] 16:25; 20:10; 38:13; 106:14, 25; 282:10; 326:9
effects [5] 47:11; 48:1; 68:25; 151:14; 159:16
efficacies [1] 193:10
efficacious [7] 41:7; 63:17; 79:9; 305:15; 312:20; 322:3; 346:1
Efficacy [1] 87:7
effort [1] 10:20
efforts [3] 11:9; 12:16; 268:21
effusion [7] 41:19; 61:6; 70:18, 22; 75:4; 236:25; 281:11
effusions [3] 143:14; 145:20; 272:15
Ehrlich [1] 250:7
eights [7] 169:22; 233:5; 254:6; 317:17; 326:23; 348:3
Eighty-two [2] 88:23; 90:23
elaborate [1] 309:8
elderly [1] 29:16
electrophoresis [4] 73:12; 74:14; 122:7; 125:17
elegantly [1] 224:6
element [2] 177:14, 15
eligible [1] 18:23
eliminate [1] 146:20
eliminated [3] 65:19; 67:14; 96:5
eliminates [1] 285:7
elimination [2] 46:15; 62:5
Ellen [2] 5:6; 8:19
elucidation [1] 130:18
emerged [1] 34:3
emergence [1] 252:2
emerging [1] 50:25
emphasis [4] 23:10; 159:2; 251:16; 259:11
emphasize [2] 11:21; 308:13
emphasized [3] 19:1; 112:19; 171:20

emphasizes [1] 303:15
Empiric [2] 338:9, 16
empiric [23] 78:14; 179:2, 7, 10; 216:3; 218:3; 332:17; 333:14; 334:1, 10, 18; 338:4, 6, 17; 339:4; 341:15, 16; 342:5, 13; 344:10, 11; 345:6, 8
empirical [1] 341:7
employed [1] 24:18
employer [1] 5:6
enables [1] 43:13
encompass [2] 335:3; 349:20
encompasses [2] 341:6; 348:18
encourage [3] 21:6; 139:22; 285:1
encouraged [4] 17:22; 18:19; 21:4; 99:6
encouraging [1] 285:2
End [7] 285:5, 7, 20; 286:20, 22, 24; 293:12
ended [5] 200:4; 314:7, 17, 18; 347:20
endedness [2] 335:8; 346:17
ending [1] 70:21
endorse [2] 310:23; 311:12
endorsing [1] 311:5
endotoxin [1] 142:2
endpoint [34] 20:24; 45:2; 85:3; 108:16; 126:16, 22; 127:5, 9; 128:1, 9, 13; 156:1; 160:24; 195:23; 198:23; 258:18, 19; 270:14; 272:11, 14; 280:17; 281:12; 283:5, 21; 284:21; 286:25; 288:14; 289:9, 19; 291:11, 12, 14, 23; 292:20
Endpoints [2] 17:24; 20:12
endpoints [11] 16:15, 17; 19:2; 22:24; 126:19, 25; 199:8; 243:14; 256:3; 271:9; 272:6
England [2] 34:25; 35:19
enhance [2] 34:13, 14
enhanced [3] 78:21; 79:1; 83:8
enhancement [3] 23:18; 25:9; 47:14
enhances [1] 36:11
enhancing [1] 34:17
enormous [1] 147:7
enrich [2] 21:11; 145:24
enriched [11] 13:1; 21:19; 81:20; 195:9; 217:1; 258:24; 270:12; 280:18; 288:8; 292:4, 21
enriches [1] 13:24
enriching [2] 13:11; 22:4
enrichment [10] 22:5; 25:19; 34:2; 145:10; 197:15; 245:8; 255:19; 258:6; 273:9; 288:2
enroll [4] 5:12; 21:6, 19; 307:13
enrolled [9] 19:23; 20:2; 96:18; 98:5; 137:5; 145:15; 157:4; 275:24; 302:1
enrollees [6] 82:17; 88:13; 89:21; 152:23; 153:14; 155:7
enrolling [1] 99:6
Enrollment [1] 81:8
enrollment [8] 18:23; 81:10, 25; 82:4; 89:25; 93:17; 96:2; 164:2
entered [2] 198:9; 297:25
entering [1] 71:24
enthusiastic [3] 311:2, 5; 312:7
entity [3] 28:17; 251:8; 303:13
entrance [3] 87:23; 88:2; 115:4
entry [4] 116:20; 123:11; 214:15, 16
enumerated [1] 22:6
environment [1] 139:17
envision [1] 248:17
epidemiologic [1] 28:7
epidemiology [3] 12:3; 23:9, 17
episode [10] 24:1, 9; 72:3; 106:5; 109:4; 197:7; 212:9; 256:17; 263:14; 305:19

episodes [8] 13:14; 22:3; 24:6; 71:23; 72:12; 109:21; 292:8; 343:17
epithelial [2] 28:12, 13
equal [31] 18:1; 45:22; 84:8; 171:9, 14, 15; 174:17; 186:14; 219:21; 228:10, 24, 25; 229:2, 3, 16, 17, 23; 230:8, 25; 231:14, 18, 19; 253:1; 256:21, 25; 257:4; 315:2; 318:21; 320:1
equation [1] 224:13
equivalence [2] 17:13; 196:16
equivalent [1] 248:15
era [4] 107:2; 161:10; 251:2; 263:24
eradicate [13] 15:8; 62:18; 65:2, 4; 94:20; 123:25; 144:19; 172:13; 226:3, 8; 251:11; 257:24; 290:4
eradicated [7] 42:9; 62:11; 85:15; 166:18; 174:17; 248:5; 250:18
eradicating [1] 27:16
Eradication [1] 75:6
eradication [49] 20:15, 19; 21:2; 45:3; 50:3; 55:12; 61:16; 62:25; 65:14; 80:18; 85:20, 21, 23; 86:5, 21, 25; 87:2; 89:2, 3, 17; 91:16, 17, 25; 98:20; 99:17; 110:11; 138:13; 141:21; 145:2; 151:4; 170:17; 172:14; 175:4, 25; 208:24; 209:1, 6; 210:21; 225:21; 226:9; 227:15; 236:17; 241:20, 23; 242:1; 247:19, 21; 260:22; 277:9
erythema [1] 42:13
erythematous [1] 236:12
escaping [1] 177:20
essence [2] 160:5; 280:13
essential [4] 293:6, 11, 15; 294:6
Essentially [3] 113:8; 166:14; 276:14
essentially [25] 21:12; 49:1, 2; 53:21; 57:23; 118:21, 24; 119:5; 120:10, 20, 22; 123:2; 158:14; 173:19; 185:7; 196:7; 200:25; 202:18; 207:1; 236:25; 237:11; 259:10; 277:12; 296:11; 302:23
establish [2] 17:12; 18:7
established [1] 252:6
estimate [15] 147:25; 149:3, 4; 154:19; 189:8, 24; 194:12; 202:5, 25; 210:16; 241:21, 25; 242:3; 304:24, 25
estimated [3] 189:9; 190:11; 193:20
estimates [1] 147:12
et [6] 20:1; 69:4; 213:23; 268:3, 22; 346:5
etiology [6] 17:4; 20:5; 25:7; 66:15; 278:21, 24
Eugene [2] 74:12; 180:12
European [1] 101:22
eustachian [4] 26:25; 27:8; 30:1; 282:15
evade [2] 29:20, 25
evaluability [1] 19:11
evaluable [3] 84:4; 160:11; 328:13
evaluate [11] 6:5; 64:6; 82:19; 83:20; 88:25; 94:19; 106:24; 107:5; 162:15; 169:3; 307:15
evaluated [13] 82:12; 84:14; 88:8; 89:8, 10; 95:7, 9; 96:11; 97:11; 104:16; 153:24; 154:5; 244:20
evaluates [1] 77:4
evaluating [4] 68:17; 69:5; 162:11; 308:24
Evaluation [3] 4:20; 188:3; 213:25
evaluation [24] 15:22; 81:1; 83:7; 91:20; 92:14; 93:19, 20; 95:20; 103:25; 108:19; 109:3, 5; 124:9; 128:13; 139:8; 141:20; 163:7; 228:14, 16, 17; 244:15; 292:12, 13; 304:4
evaluations [2] 228:19; 287:25

dysfunction to evaluations

345:3
Harrison [11] 6:3, 7, 9:13; 122:15;
 125:24; 145:7; 161:6; 168:1; 175:7;
 179:12; 267:8
hasn't [1] 289:12
hate [2] 103:17; 172:13
haven't [7] 118:15; 130:25; 159:13;
 209:12; 323:10; 333:7, 8
head [4] 163:5; 174:20; 332:20
head-to-head [4] 101:20; 156:16, 22;
 158:20
heading [1] 313:6
Health [2] 8:3; 9:8
health [4] 10:11; 29:16; 43:24; 78:24
hear [15] 12:25; 13:5; 28:23; 124:16;
 135:10; 184:4; 224:5; 246:5; 257:14;
 267:9; 296:3; 317:14; 339:10; 340:9;
 345:2
heard [16] 107:9; 122:23; 176:19; 187:19;
 195:9; 198:25; 235:8; 245:18; 266:21;
 274:25; 292:5; 293:9; 301:4; 320:5;
 327:20; 345:8
Hearing [1] 182:25
hearing [9] 13:20; 28:23; 61:8; 109:9;
 182:19; 296:13, 14; 324:21; 347:7
heart [2] 21:5; 303:21
heavily [2] 19:1; 20:7
heck [1] 246:9
held [1] 169:5
help [9] 118:11; 249:11; 272:14; 274:22;
 307:14; 309:19; 321:11; 323:21; 340:1
helped [1] 58:23
helpful [10] 42:20; 68:7; 122:2; 149:24;
 150:9; 154:12, 13, 23; 264:22; 331:16
helps [2] 121:7; 167:6
Hemophilus [1] 309:16
hence [1] 24:13
heralded [1] 30:23
heretofore [3] 334:25; 335:11; 346:2
hiding [1] 167:20
high [42] 30:9, 14; 39:25; 50:3; 54:9;
 58:5; 61:2; 64:10; 65:4; 68:13; 85:13;
 95:5, 6, 15; 100:10; 110:7; 112:1; 141:19;
 163:16; 166:6; 173:5; 177:16; 227:15;
 228:2; 255:13, 22; 258:7, 13; 264:12;
 278:20; 335:9; 341:17; 342:3, 15; 343:10,
 14; 344:2; 345:9; 346:21; 347:10; 348:18,
 25
higher [48] 13:25; 21:18; 30:10; 47:19;
 49:7; 53:12; 54:8; 57:9; 58:2; 59:7, 21;
 65:5; 66:14; 88:16; 92:9, 20; 93:8, 17;
 107:18; 111:10, 14; 117:14; 129:10;
 140:11; 149:15; 158:9; 161:13; 170:22;
 226:10; 227:24; 233:18; 253:18, 19;
 256:17;
 258:15; 267:10; 279:19; 305:7, 9; 309:14;
 315:2; 324:15; 326:8; 328:10; 332:4;
 338:22; 345:25; 349:22
highest [3] 109:20; 177:23; 205:13
highlight [1] 88:12
highlighting [1] 84:8
highly [6] 88:20; 95:13; 296:18; 324:14,
 17; 338:18
histogram [3] 220:17; 229:7; 254:2
histograms [2] 221:22; 253:15
historical [1] 279:20
history [27] 21:21; 23:1, 9; 44:18; 86:9,
 11, 13, 25; 87:4; 88:15; 92:21; 93:8, 16;
 95:14; 117:14; 154:4; 213:11; 217:20;
 235:18; 271:7; 298:5, 7, 13; 299:7, 21;
 300:5; 310:6

hit [1] 228:3
Hoffman [1] 165:10
hold [3] 122:21; 126:11; 202:9
holds [1] 227:14
home [6] 30:11, 12, 17; 36:5; 37:19;
 109:2
hope [5] 50:17; 68:6; 109:12; 131:17;
 242:21
hoped [1] 109:11
hopefully [2] 118:17; 271:16
horizontal [1] 52:12
horse [2] 75:22; 234:1
Hospital [4] 7:21; 8:21, 24; 46:4
hospital [1] 70:9
host [4] 41:3; 68:20; 264:18; 302:7
hour [5] 109:1; 183:1; 189:22; 327:18
hourly [1] 185:8
hours [30] 48:15; 50:2; 53:16, 17; 57:15;
 61:19; 66:10; 70:16; 83:6; 104:16, 19;
 108:1; 116:14; 186:6, 23; 189:4, 19, 22,
 23; 190:7, 8, 9, 21; 191:5, 6, 12; 192:3, 6;
 193:24
Houston [1] 8:6
hovering [1] 226:14
Howie [3] 76:2; 86:15; 240:18
huge [3] 49:7; 159:11; 350:3
human [6] 50:17; 54:11; 57:1; 219:12;
 224:5; 300:10
humans [1] 50:13
hundred [2] 98:5; 199:20
hundreds [1] 135:21
hypothesis [1] 72:21

- I -

I've [22] 22:6; 36:1; 40:12; 41:10; 68:12;
 74:16; 75:4; 103:7; 119:24; 120:10;
 129:13; 176:19, 24; 205:21, 25; 207:20;
 208:25; 215:7; 241:11; 259:22; 262:7;
 290:10
I.D. [2] 177:7; 311:16
ICCAC [4] 74:11; 172:3; 178:8; 180:13
idea [7] 68:12; 81:22; 147:19; 239:5;
 246:12; 250:17; 262:10
Ideally [1] 105:23
identical [1] 142:10
identifiable [1] 143:9
identified [6] 28:15; 31:16; 181:7; 204:13;
 257:7; 346:22
identifies [1] 342:15
identify [6] 272:14; 290:1; 301:2; 339:2;
 343:10; 348:24
IDSA [5] 18:12; 44:10; 101:14; 108:23;
 246:25
IDT [1] 110:15
ignore [1] 319:24
ignores [1] 37:18
ignoring [1] 287:4
IL-1 [1] 142:14
ill [1] 136:21
Illinois [1] 9:6
illustrate [1] 151:22
illustrated [1] 52:1
imagine [1] 174:21
imagining [1] 248:15
immediate [1] 267:10
immediately [1] 38:4
immune [1] 41:21
Immunology [1] 8:20
impact [5] 25:4; 27:6; 37:18; 281:7;
 288:19

impaired [1] 186:18
impairment [1] 19:24
implicate [1] 41:13
implication [2] 164:18; 173:24
implications [3] 21:16; 63:19; 164:22
implied [1] 301:25
imply [1] 126:10
importance [9] 17:3; 22:10, 13, 19;
 46:10; 191:23; 251:7, 16; 303:15
importantly [4] 13:12; 85:18; 109:8;
 328:6
impossible [1] 281:14
impression [1] 28:8
impressive [1] 328:2
imprimatur [1] 243:22
improve [2] 82:24, 25
improved [1] 237:10
improvement [3] 91:25; 214:23; 312:12
improving [3] 83:5; 116:13; 299:19
inability [1] 138:6
inadequate [4] 41:15; 193:9; 280:5; 301:8
inception [1] 5:12
inches [1] 10:15
incidence [2] 107:18; 144:3
incidentally [1] 37:21
inclined [1] 325:9
include [5] 22:2; 55:2; 219:10; 229:24;
 313:4
included [19] 31:17; 45:7; 119:24; 124:1;
 134:13; 139:6, 7, 8; 163:21; 170:13;
 188:11; 201:8; 202:22; 204:17; 208:20;
 229:1; 274:12; 319:6; 341:10
includes [6] 206:10; 230:1; 256:9; 314:8;
 340:23; 341:8
inclusion [4] 13:16; 21:13; 82:8; 202:12
inclusive [1] 266:1
inconsistency [2] 213:4; 300:8
inconsistent [1] 159:24
incorporate [1] 272:20
increase [13] 19:15; 21:15; 30:23, 24;
 36:3; 47:20, 22; 125:3; 176:15; 179:15;
 192:13; 264:1
increased [7] 28:6; 35:8; 144:6; 179:18;
 180:1; 209:11; 225:23
increases [1] 40:18
Increasing [1] 78:11
increasing [8] 31:3, 9; 35:11; 43:23;
 47:10; 137:11; 178:24; 285:24
increasingly [3] 44:3; 278:12; 297:1
indicate [4] 74:16, 17; 295:1; 328:18
indicated [12] 32:7; 45:16; 106:16;
 117:22; 186:10, 20, 24; 294:3; 316:8, 11;
 317:1; 343:3
indicates [2] 229:8; 286:14
indicating [1] 344:25
indication [16] 45:16; 80:12; 89:10;
 111:19, 23; 185:16; 186:8; 187:15;
 203:15; 216:3; 281:10; 313:8, 16; 318:11,
 17; 336:22
indications [2] 184:12; 265:22
indicators [1] 47:5
Indies [1] 7:22
individual [2] 31:22; 131:2
individually [1] 131:4
individuals [3] 10:12; 282:1; 341:10
induce [1] 142:5
induced [1] 205:25
indulgence [2] 93:24; 320:17
industry [1] 243:21
ineffective [1] 303:10
infant [1] 106:3

infants [4] 105:7, 17; 112:1; 173:5
infected [4] 181:4, 10; 225:17; 279:19
infection [50] 17:4; 20:5; 26:7, 11, 12, 15, 24; 41:16, 20; 42:5, 6; 46:20; 49:16; 51:7; 60:25; 61:3; 68:18, 19; 72:13; 74:17; 75:14; 91:10; 92:17; 106:6, 8; 115:24; 117:21; 140:21; 143:15; 181:18; 225:3; 248:22, 24; 259:4, 21; 261:15, 19, 20; 264:17; 267:19; 272:15; 277:15; 278:1, 25; 284:8; 299:13; 302:8, 12; 313:8, 15
infections [26] 21:22; 50:17; 73:7, 14, 21, 25; 74:7, 18; 78:6, 23; 101:24; 102:14; 109:24; 134:24; 146:15, 22; 251:3; 259:19; 261:5, 12, 13; 284:9, 10; 292:14; 298:24
Infectious [17] 7:15, 19, 24; 8:1, 5, 8, 13, 20; 9:1, 10, 14, 17; 36:16; 37:9; 106:18, 21; 111:9
infectious [5] 7:22; 8:22; 46:3; 103:17; 312:1
infective [3] 17:1; 185:1; 226:6
infects [1] 250:20
inferior [1] 63:14
inflammation [8] 16:7; 29:3; 30:2; 42:11; 140:11; 142:12, 15; 146:12
inflammatory [16] 27:11, 12, 13, 15, 17, 18; 28:10; 68:20; 140:19; 141:17, 23; 142:5, 9, 13, 22; 143:2
influence [1] 277:22
influenced [1] 308:1
influenza [3] 26:16, 17; 208:6
influenzae [18] 18:9; 25:22; 30:25; 45:19; 54:16; 56:6; 72:7; 78:4; 84:17; 101:7; 107:24; 114:10; 119:12; 137:21; 176:1, 3; 185:21; 186:12
influx [3] 27:10; 142:9, 14
inform [1] 12:8
Information [1] 5:3
informative [5] 44:12; 217:7; 231:15; 270:17; 293:1
inhibit [2] 74:6; 75:13
inhibited [1] 248:8
inhibiting [2] 79:9; 101:2
inhibitory [1] 47:3
initial [21] 54:23; 61:2; 68:4; 70:15; 73:16; 80:17, 23; 82:10, 16; 83:19, 22, 24; 96:7; 99:21; 136:22; 138:25; 179:14; 272:21; 279:13; 280:19; 282:22
Initially [1] 30:23
initially [1] 72:15
initiated [1] 184:4
initiating [2] 44:25; 91:6
initiation [2] 80:2; 108:2
injection [1] 241:6
inordinate [1] 328:9
input [1] 97:11
insert [7] 252:6; 267:4; 313:12; 315:19; 318:7; 319:20; 337:8
inserts [1] 313:4
inside [1] 140:21
instance [1] 152:17
instances [2] 106:9; 142:20
Institutes [1] 9:8
instructed [1] 139:3
instruction [1] 330:21
instructions [2] 340:4; 344:15
int [1] 206:5
integrity [1] 5:21
intended [1] 109:3
intent [13] 83:9, 11; 84:3; 85:21; 99:19;

108:23; 149:9, 13; 153:23; 174:16; 256:18; 324:5, 13
intention [1] 148:16
inter-subject [1] 192:25
interest [18] 4:13, 22; 5:15, 16, 18, 19; 6:4, 15, 20; 145:4; 165:6; 204:4; 214:2; 244:5, 13, 19; 255:6
interested [9] 46:9, 24; 134:23; 164:21; 193:2; 204:7; 212:1; 214:7; 233:16
Interesting [1] 157:2
interesting [8] 33:8; 34:1; 36:15; 37:20; 38:8; 101:11; 179:17; 241:7
interests [2] 4:17, 19
interim [1] 195:20
interject [1] 320:16
intermediate [29] 40:16; 55:2, 25; 86:4; 93:6; 163:3; 168:9; 172:16, 20; 180:16; 221:6, 7, 17, 18; 222:12; 229:15, 25; 253:8, 14; 265:11, 16; 266:1, 2, 15; 318:1; 335:4, 23; 336:1
intermediately [1] 167:24
intermediates [3] 167:11; 230:2; 253:7
interpret [6] 148:3; 149:19; 213:9; 281:15; 308:15; 323:12
interpretability [1] 165:3
interpretation [5] 16:2; 23:6; 223:6; 251:23; 280:18
interpreted [2] 235:13; 329:3
interpreting [1] 110:2
interpretive [1] 333:2
interval [39] 51:3, 5; 52:18; 53:9; 58:19; 144:21; 147:24; 150:17, 24; 151:13; 155:15; 158:24; 162:10; 166:3, 6; 188:15; 202:4, 24; 210:15; 223:24; 224:2, 12, 14; 239:7, 14; 240:1, 5; 241:21, 24; 242:3, 7; 250:12; 304:25; 307:20; 324:3, 8; 331:4, 22; 350:5
intervals [32] 147:23; 149:23; 150:1, 16; 151:4, 7, 25; 152:2, 13; 153:1, 19; 154:9, 16; 155:18; 159:21; 160:1, 5, 12; 164:7; 165:18, 21; 171:5, 7; 174:19, 25; 303:17; 308:1, 3, 10; 323:22; 328:19; 330:19
intervention [2] 15:1; 347:5
intramuscular [3] 111:20; 238:13; 241:6
intrinsic [1] 282:15
introduce [3] 6:25; 102:19; 188:2
introduced [1] 63:9
introduction [3] 7:2; 219:6, 19
invade [3] 27:9; 29:23; 30:5
invariably [1] 148:10
invasive [1] 34:10
investigational [1] 139:2
investigator [13] 83:6; 84:25; 85:8; 99:22; 116:10, 14, 16; 132:17; 133:22; 198:16; 201:20, 21; 206:6
investigators [2] 54:25; 99:4
invited [2] 6:2; 243:21
inviting [1] 23:14
involve [2] 6:13; 156:16
involved [6] 10:12; 13:19; 69:7; 138:23; 244:11; 255:4
involvement [3] 6:17, 21; 218:11
involves [2] 140:22; 251:25
involving [3] 6:12; 61:15; 92:17
irritability [1] 62:13
irritable [1] 20:2
isolate [10] 72:25; 119:8; 126:3; 137:11; 199:21; 215:4; 220:21; 221:16; 223:10; 342:23
isolated [10] 32:3; 38:9; 83:18; 84:2, 6; 99:13; 113:12; 141:25; 198:3; 208:6

isolation [1] 66:13
ISP [1] 168:6
Israel [4] 37:6; 80:5; 137:6; 263:23
Israeli [1] 138:3
issue [43] 4:12; 14:10; 25:9; 32:6; 33:6; 34:2; 36:1; 61:17; 62:2, 3; 66:18; 68:20; 73:20; 106:19, 20; 125:2; 129:2; 134:17; 144:7; 155:16; 166:23; 175:24; 176:2; 184:21; 205:22; 213:7; 215:21; 216:7; 224:8; 232:20; 249:21; 250:8; 253:23; 280:3; 302:25; 308:24; 318:15, 16; 333:9; 334:1, 10; 335:8, 15
issues [27] 9:23; 11:22; 22:10, 23; 23:19; 28:24; 38:25; 60:11, 13, 17; 61:11; 76:17, 18; 103:23; 112:19, 23; 182:16; 212:22; 215:11; 216:2; 257:19; 270:3; 272:8; 303:1; 317:3, 8; 326:22
item [1] 182:20
iteration [1] 271:19
ITT [21] 110:13; 120:13; 139:7; 148:9, 16; 149:1; 152:4, 6; 160:11; 199:23, 25; 202:6; 203:3, 11, 18; 204:15; 207:19; 209:14; 227:4; 233:3; 239:3
IV [2] 7:1; 301:18

- J -

Jack [1] 55:5
Jacob [1] 118:22
JACOBS [9] 125:11; 129:13; 253:24; 258:22; 259:2, 7, 12, 16; 276:14
Jacobs [5] 63:22; 125:10; 129:1, 11; 253:22
JAMA [1] 249:12
Janice [1] 7:7
January [4] 111:8, 10; 265:1, 18
Jerome [1] 108:25
Jim [3] 8:1; 128:23; 344:9
Joan [1] 7:17
job [3] 66:4; 67:13; 350:17
John [8] 120:9, 25; 121:10; 125:24; 235:15; 252:22, 24; 253:7
Johnson [1] 39:20
Jose [1] 9:16
Journal [7] 34:25; 35:19; 106:18, 21; 111:9; 177:7; 311:17
journals [1] 177:19
judge [1] 273:16
judged [3] 17:23, 24; 108:5
Judith [1] 8:17
Julio [3] 4:25; 8:7; 11:16
July [2] 44:14, 20
jump [2] 154:3; 323:16
jumps [2] 222:24; 253:6
June [2] 99:6, 11

- K -

Kaleida [5] 25:11; 39:2; 67:25; 154:19; 213:20
Kaleida-Pittsburgh [1] 69:22
Kathleen [1] 143:18
Kathy [1] 144:4
keen [1] 77:11
keep [8] 47:22; 98:18; 139:4; 146:4; 264:7; 286:2; 345:5; 347:3
keeping [1] 268:5
Keith [2] 9:4; 11:6
Kentucky [2] 8:9; 264:11
kept [6] 79:6, 10; 260:19; 261:1; 266:8, 11
key [7] 85:3; 102:3; 176:2; 243:16;

infants to kept

320:22; 322:16
kg [1] 303:5
kids [7] 116:2; 130:15; 136:6; 146:24;
 257:8; 301:11; 338:5
kill [11] 49:24; 50:1; 53:24; 56:20; 57:23;
 58:1, 21; 75:14; 141:15; 249:22; 277:11
killed [2] 248:8, 18
killing [9] 47:10, 11, 18, 20, 22, 24; 48:24;
 51:16; 145:3
kilo [4] 43:17; 173:10, 11; 177:8
kilogram [11] 79:8, 12; 80:7; 103:19;
 111:6, 24; 180:14; 186:23; 188:24; 328:7;
 340:17
kilograms [1] 186:24
kindly [1] 62:8
kinds [2] 140:22; 160:22
kinetics [7] 125:8; 130:9, 17, 20; 349:25;
 350:1
kits [1] 143:2
Klebsiella [1] 48:12
Klein [2] 108:25; 239:16
knowing [4] 148:4; 164:21; 300:4; 342:6
knowledge [2] 5:14; 103:18

- L -

lab [8] 49:25; 118:23; 129:8; 137:18, 19;
 142:2; 176:22; 232:12
label [9] 197:3; 313:13; 327:11; 336:21;
 344:22, 23; 347:1, 19
labeled [1] 340:11
labeling [6] 238:19; 300:12; 314:24;
 319:8; 326:11; 346:5
labels [1] 313:5
laboratories [3] 265:2; 317:18; 328:25
labs [2] 49:25; 142:3
lack [2] 200:5; 215:22
lactamase [2] 31:1; 136:1
lag [1] 65:14
language [3] 61:10; 109:10; 315:18
large [10] 70:15; 105:11; 128:17; 142:9;
 144:13; 173:2; 193:7; 263:10; 341:6;
 343:19
largely [7] 23:24; 24:7; 25:2; 30:25;
 36:10; 315:14, 25
larger [5] 18:15; 110:4, 18; 111:17; 341:8
largest [2] 28:18; 84:12
LaRoche [1] 165:10
last [35] 16:19; 20:14; 22:20; 28:6; 30:22;
 31:6; 32:10; 36:16; 37:9; 59:11; 93:16;
 109:1; 121:3; 126:2; 131:7; 137:10; 138:1,
 14; 144:5; 172:3; 180:13; 216:21, 23;
 218:9; 237:7; 241:9; 243:25; 247:17;
 248:4; 270:8, 10; 307:18; 316:3, 11,
 16
lastly [1] 184:22
late [7] 25:11; 67:7, 11; 244:13; 285:1;
 287:12; 292:5
laterality [2] 124:15, 18
latter [2] 148:24; 338:8
Laughter [1] 297:8
Laughter [7] 240:14; 244:24; 262:5;
 324:22; 325:3; 330:24; 331:3
lead [5] 29:22; 61:7, 9; 216:12; 282:18
leader [1] 188:8
leading [2] 26:17; 97:4
leads [4] 26:25; 28:17; 175:22; 197:1
learn [1] 22:25
learned [2] 92:6; 299:22
leave [1] 332:11
leaves [1] 283:17

leaving [1] 10:5
lecturing [1] 111:11
left-hand [4] 83:10, 21; 150:25; 170:11
LEGGETT [21] 8:1; 125:1; 130:8; 256:5,
 13; 272:4; 284:16; 291:22; 294:9; 300:21;
 317:8; 324:20; 325:16; 330:4; 333:12;
 341:14; 342:19, 24; 343:5, 8; 349:23
Leggett [19] 8:1; 124:25; 130:7; 272:3;
 284:22; 288:15; 291:21; 294:11; 300:20;
 302:24; 317:5, 7; 324:19; 325:15; 330:4;
 333:11, 21; 334:19; 341:13
Leibowitz [5] 74:12; 122:11; 180:13;
 251:2; 263:22
leisure [1] 35:3
length [2] 243:11, 20
lenience [1] 306:14
letter [1] 246:24
leukocyte [1] 47:14
level [9] 58:17; 190:3; 248:3, 18; 303:9;
 315:7; 321:7; 326:22; 331:13
leveled [1] 348:2
leveling [1] 32:10
levels [11] 38:5; 53:7; 57:11; 63:11, 25;
 131:4; 140:25; 273:12; 300:7; 301:9;
 318:15
levofloxacin [2] 168:19; 187:6
licensed [3] 31:17; 35:16; 265:2
lie [1] 149:16
lies [1] 149:4
life [1] 36:5
light [3] 165:12; 288:24; 315:18
lighter [2] 151:2; 170:11
liked [1] 20:18
limit [3] 170:7; 308:6; 316:1
limitation [1] 104:15
limitations [1] 104:8
limited [4] 54:24; 72:9; 235:1; 257:22
limits [3] 165:2; 299:6; 327:3
line [10] 34:12; 41:10; 48:21; 52:11;
 73:23; 96:23; 151:14; 250:6; 300:11;
 332:6
linear [1] 177:9
lines [1] 260:16
linkage [2] 348:22; 349:1
lip [1] 343:18
listed [4] 18:20; 199:8; 211:14, 21
listen [1] 10:18
Listening [1] 296:2
listening [2] 285:18; 290:10
literature [14] 21:17; 24:24; 39:17; 53:25;
 57:25; 78:20; 79:3; 92:13; 115:23; 122:2;
 137:10; 213:16; 259:14, 17
live [2] 303:11; 345:14
living [1] 250:22
local [1] 29:25
locally [1] 29:23
locations [1] 266:18
log [6] 49:24; 53:24; 56:20; 57:23; 58:6;
 192:22
logic [1] 279:4
logical [2] 287:24; 300:8
logs [1] 50:1
long-term [1] 28:20
long-winded [1] 242:20
looks [21] 53:2; 56:9; 63:16; 86:3; 100:3;
 174:15; 190:16, 20; 192:8; 220:14, 21;
 221:2; 222:1, 11, 14, 22; 223:9; 226:6;
 227:13, 19; 231:7
loose [1] 23:24
lose [1] 27:14
loss [2] 28:24; 266:23

lost [3] 36:8; 99:21; 346:14
lot [34] 19:22; 28:23; 62:21; 78:20; 82:6;
 83:17; 86:10, 12; 108:11; 142:15; 144:7;
 146:6; 148:11; 149:20; 162:23; 166:3, 4,
 10; 168:24; 175:13; 245:19; 246:9; 249:2;
 255:13, 16; 257:14; 259:18; 264:1; 266:9;
 311:22; 346:14; 349:17; 350:6,
 11
lots [1] 130:11
Louisville [2] 8:8; 9:15
love [1] 10:3
lovely [1] 147:8
low [19] 30:15; 52:3; 143:1; 145:11;
 158:19; 160:5, 6; 163:24; 168:22; 174:22;
 222:4; 227:16; 231:3, 6; 302:21; 307:25;
 324:3; 341:19; 343:10
lowest [3] 32:14, 15; 242:10
lucky [1] 69:9
lump [2] 168:19; 169:21
lumping [4] 168:17; 169:9; 174:13; 326:1
lunch [4] 182:18, 21; 183:1, 6
lung [3] 48:15; 51:8; 57:14
lungs [1] 225:9

- M -

macrolides [4] 33:14, 16; 109:15; 348:5
Madison [1] 8:24
magical [1] 308:3
magnificent [1] 147:6
magnitude [2] 50:11; 51:2
main [1] 211:17
mainly [2] 108:11; 266:9
maintain [2] 141:16; 291:11
maintains [3] 78:7; 102:11, 15
major [11] 19:17; 29:16; 30:21, 22; 31:6,
 13; 42:5; 48:8; 56:15; 159:6; 242:9
majority [12] 27:4; 31:16; 33:20; 35:14;
 55:8; 70:10; 208:25; 278:24; 326:1; 332:3;
 344:12; 346:23
MAKHENE [40] 7:9; 118:13; 121:16;
 122:19; 123:1, 10, 17; 125:23; 127:4, 20,
 24; 128:8, 14; 132:11, 23; 133:5, 9;
 166:11; 167:9, 13, 21; 168:8; 184:6;
 194:20; 232:18; 233:1; 234:4, 9, 12, 18,
 23; 235:2, 5, 15; 237:20; 259:9, 15;
 273:23; 274:15;
 318:10
Makhene [12] 7:10; 118:14; 124:1;
 125:22; 127:3; 184:5; 218:16; 228:15, 17;
 232:2; 240:13; 256:14
male [2] 93:12; 200:8
Mamodikoe [1] 184:5
management [1] 103:15
manages [1] 226:3
mandated [1] 114:13
Mandell [1] 24:15
mankind [1] 291:18
march [1] 205:9
MARCHANT [6] 60:10; 250:12; 255:12;
 256:12; 263:8, 21
Marchant [12] 39:19; 40:24; 60:9; 86:10;
 87:8; 91:1, 14; 106:16; 155:11; 250:11;
 255:3, 9
margin [1] 194:4
marginal [1] 311:9
marker [2] 188:14; 302:7
markers [2] 38:13; 194:5
market [2] 78:18; 312:14
marketed [5] 43:12; 78:9; 101:20;
 102:16; 344:22

Maryland [1] 7:24
mastoiditis [2] 28:2, 5
material [4] 10:17; 112:7; 130:2; 142:24
materials [2] 143:19; 147:10
math [4] 39:5; 152:14; 158:20; 256:20
mathematics [1] 39:10
matter [12] 26:23; 112:12; 123:23; 222:5, 16; 225:19; 269:12; 276:23; 293:7; 320:23; 335:8; 346:9
maxillary [2] 54:21; 55:14
maximum [1] 53:10
Mayo [1] 8:18
McCRACKEN [7] 102:23; 135:1; 171:25; 173:9, 19; 174:1; 180:10
McCracken [7] 102:19; 141:14; 146:6; 171:19; 177:4; 180:9; 251:12
mcs [1] 303:5
meaning [5] 5:16; 216:25; 276:10; 301:24; 302:10
meaningful [5] 60:22; 61:13; 75:10; 107:20; 296:10
means [8] 13:14; 65:13; 96:17; 160:2; 217:2; 248:7; 267:11; 333:14
meant [3] 248:2; 288:10; 345:21
measure [10] 20:9, 21; 60:18; 67:6, 10; 68:24; 70:18; 105:24; 261:13; 287:10
measured [9] 22:14; 61:7, 19, 21; 70:16; 71:10; 75:20; 108:10; 128:9
measurement [2] 22:24; 135:5
measurements [2] 22:25; 90:7
measures [3] 22:11; 194:14; 285:22
measuring [5] 47:1; 60:12; 61:18; 66:19; 104:10
mechanism [8] 30:6; 169:6, 7; 173:15; 176:5; 251:4; 343:22, 23
mechanisms [1] 41:3
media [2] 9:2; 213:24
median [1] 125:7
mediated [2] 30:25; 96:20
mediators [3] 27:12; 42:12; 142:22
Medical [5] 7:15; 8:2, 5, 10, 14
medical [4] 32:12; 118:14; 166:12; 285:19
Medicine [4] 9:3, 5, 8; 46:5
mediocre [1] 64:18
medium [1] 248:16
meet [3] 84:9; 161:14; 269:10
meeting [19] 4:5, 8, 13, 15, 17, 22; 5:25; 10:6, 8; 44:14; 103:3; 111:11; 183:5; 238:5; 280:19; 281:20; 282:5; 297:25; 350:20
meetings [4] 243:11; 244:10, 22; 251:6
member [1] 43:2
members [15] 6:25; 10:4, 6, 22; 11:12; 43:1; 46:8; 112:24; 164:15; 186:17; 232:3; 272:2; 281:19; 282:4, 5
membrane [5] 16:8; 19:25; 72:6; 73:2, 11
membranes [4] 19:24; 21:20; 132:9; 236:20
Memorial [1] 46:4
memory [2] 255:5; 264:24
Memphis [2] 7:18; 343:25
meningitis [25] 28:2; 29:14, 23; 36:23; 38:2; 105:2, 3, 9; 107:22, 24; 108:4; 142:7; 146:5, 19; 178:12; 180:3; 248:25; 251:13; 265:14, 20; 329:7; 335:4, 6, 24; 36:12
mention [4] 32:8; 133:21; 190:5; 314:23
mentioned [29] 35:13, 20; 55:5; 61:8; 75:5; 121:16, 25; 151:18; 178:21; 191:24; 196:17; 198:19; 200:7; 201:18; 207:20;

209:1; 212:21; 215:7; 221:23; 236:3, 15; 237:24; 248:24; 272:19; 276:16; 277:9; 287:25; 289:12; 310:12
mentions [1] 16:18
Meriter [1] 8:24
message [3] 344:17; 346:24; 347:7
meta [1] 151:15
metaplasia [1] 28:13
methodologic [1] 268:12
methodologies [2] 138:15; 226:19
methodology [2] 252:16; 268:23
methods [3] 129:6; 268:16, 20
mice [5] 48:13; 50:15; 52:3, 20; 53:3
Michael [3] 63:22; 129:1, 11
Michigan [1] 9:18
micro [8] 18:6, 16; 19:13; 196:19; 259:1; 270:13; 275:21; 278:16
microbial [1] 18:7
microbiologic [22] 12:22; 13:20; 14:2, 8, 18; 15:6; 16:16; 17:4, 16, 25; 19:3; 20:24; 22:12, 14; 24:17; 71:15; 217:5; 270:14; 275:10; 278:10, 24; 279:5
microbiological [2] 279:13; 292:13
microbiologist [1] 128:24
microbiologists [1] 75:11
Microbiology [2] 8:14; 213:25
microbiology [8] 218:25; 239:18; 240:10; 276:12; 280:21; 286:14; 293:11; 328:25
microgram [4] 33:1; 228:10; 229:11; 230:8
micrograms [30] 45:22; 78:1; 100:18; 102:9; 104:22; 129:17, 20; 186:15; 219:22; 221:9; 224:10; 230:8; 231:15; 254:9; 265:10, 17; 266:3; 322:12; 327:24; 328:3, 5, 6; 329:13; 330:15; 334:21; 340:18, 21; 341:4; 347:17; 348:17
MID [3] 304:4; 315:2; 322:22
mid-200s [1] 158:19
mid-twos [1] 158:7
Middle [2] 61:6; 75:4
Middleton [1] 46:4
Mike [1] 55:6
mild [4] 25:13, 20; 39:4, 14
mildest [1] 29:10
mildly [1] 170:15
milieu [1] 27:17
MILLER [1] 233:20
milligram [6] 79:7, 11; 80:7; 103:19; 111:23; 188:24
milligrams [16] 43:14, 17; 111:6; 173:10, 11; 180:13; 185:6, 7, 13; 186:4, 22; 328:7; 340:16; 344:3
milliliter [2] 100:19; 102:10
milliliters [1] 43:15
million [4] 23:25; 24:12; 29:11; 311:20
millions [1] 23:23
mind [14] 98:18; 146:4; 226:23; 264:8; 274:8; 276:15; 277:17; 279:3; 288:1; 295:15; 298:6; 316:4; 335:17; 345:5
mine [1] 227:9
minimal [2] 47:3; 48:1
minimum [1] 47:3
Minnesota [1] 9:3
minor [1] 143:24
minority [3] 164:1; 250:15; 326:2
minus [9] 140:14; 228:15; 239:7, 8, 15; 240:1, 6
minute [1] 10:3
minutes [4] 15:19; 183:1; 195:2; 269:11
misinforming [1] 230:19
miss [2] 295:2; 342:20

missing [1] 227:16
mistake [2] 139:14; 304:2
misunderstood [1] 274:21
mix [2] 307:13; 309:20
mixed [2] 119:23; 227:6
mixes [1] 230:11
mixing [1] 230:9
mL [30] 33:1; 45:23; 78:1; 104:22; 129:17, 21; 186:15; 219:22; 221:9; 224:10; 229:11; 230:8; 254:9; 265:10, 17; 266:3; 322:12; 327:24; 328:3, 5, 6; 329:13; 330:15; 334:21; 340:19, 21; 341:4; 347:17; 348:18
mobility [10] 19:25; 235:23, 25; 236:21, 22, 24; 237:2, 8, 12, 15
model [18] 48:13; 49:16; 53:15, 17; 54:11; 57:13; 98:16; 100:13; 105:3, 5; 140:7; 142:8, 11; 177:20; 178:11; 223:22, 25; 225:2
modeling [1] 247:18
models [12] 48:10; 50:20; 51:7; 53:10; 56:22; 100:22; 178:2, 3; 219:13; 225:1; 248:21; 250:8
moderate [1] 48:1
moderately [1] 300:14
modification [1] 12:18
molecular [1] 74:13
Mom [1] 262:1
moment [4] 31:25; 32:8; 241:13; 326:14
money [1] 243:14
Monte [1] 130:19
month [5] 38:20; 94:25; 188:22; 272:18; 278:5
months [35] 21:16, 22, 23; 38:9; 81:23; 83:14; 88:14, 19; 89:7, 8; 90:15; 93:10; 94:12, 13, 16; 158:10, 11; 163:7, 8; 172:10, 22; 177:18; 186:21; 197:6, 9; 200:7, 14, 18; 206:23, 25; 207:2; 256:16; 264:13; 276:5
Moraxella [17] 18:10; 25:4; 26:13; 30:24; 39:9; 45:19; 72:9, 22, 23; 78:4; 84:17; 92:3; 101:7, 10; 137:22; 185:21; 216:6
Moraxellas [1] 72:23
morning [36] 4:3, 11; 7:6, 9, 12; 9:22; 10:21; 11:20; 12:15; 15:15; 42:25; 60:10, 11, 14; 63:9; 65:21; 76:19, 25; 77:3, 7; 102:23; 112:17, 18; 118:13; 124:16; 143:21; 171:17; 191:25; 198:25; 250:15; 258:24; 263:22; 274:16; 292:5; 294:23; 314:7
mostly [2] 66:13; 317:16
mother [1] 107:17
move [9] 29:25; 40:15; 69:11; 182:20; 184:14; 201:5; 207:4; 211:6; 326:8
moved [1] 316:5
moving [8] 68:10, 11; 195:2; 199:16; 268:8; 288:18; 325:17; 341:1
mucin [1] 28:15
mucoid [1] 41:18
mucosa [1] 140:22
mucosal [5] 29:21, 25; 30:4; 282:13, 16
mucus [3] 27:1; 28:14, 16
muddled [1] 144:6
multi-center [3] 79:21; 80:4; 197:3
multi-drug [2] 35:10; 36:17
multi-part [1] 298:10
multiple [2] 84:18; 112:18
murine [3] 49:16; 223:22, 25
MURPHY [26] 9:21; 11:5, 12; 165:15; 168:7, 10; 182:10; 257:19; 259:1, 6; 331:8; 332:15, 21; 334:12; 340:5; 342:14,

22, 25; 343:6; 344:16; 345:17; 346:14;
348:12, 22; 349:5; 350:16
Murphy [9] 7:1, 3; 9:20; 22:8; 25:15;
331:6; 339:19; 340:14; 344:14
MURRAY [35] 8:4; 126:4; 127:18, 21;
128:7, 10; 140:2; 160:9, 14; 168:13;
169:19; 178:7; 232:5, 9, 23; 233:6, 14, 16;
242:23; 244:10; 247:24; 248:1; 284:25;
291:13; 294:12; 301:15; 310:11, 16;
314:3, 6; 318:25; 325:23; 330:3; 332:10,
20
Murray [17] 8:4; 139:25; 168:12; 174:6;
178:5; 232:4; 242:22; 243:9; 247:25;
284:24; 288:15; 291:20; 294:12; 301:14;
310:9; 318:24; 325:22
myringotomy [1] 70:5
myself [3] 104:7; 291:22; 344:4

- N -

name [8] 7:6, 9, 12; 43:2; 188:7; 287:5, 8
named [1] 5:10
Namely [1] 22:10
names [1] 47:12
Nancy [1] 112:9
nasopharyngeal [5] 27:9; 107:1; 116:4;
171:22; 172:8
nasopharynx [3] 29:20; 66:11; 250:19
National [2] 9:8, 10
natural [22] 23:1, 9; 86:9, 11, 12, 25;
87:4; 88:15; 154:4; 180:20, 24; 213:10;
217:20; 271:7; 298:5, 7, 13; 299:7, 21;
300:4; 304:3; 310:5
naturally [4] 142:16; 271:11; 282:17, 18
nature [2] 138:7; 162:2
NCCLS [17] 32:7, 25; 58:22, 23; 252:1;
264:23; 265:19; 268:21; 317:25; 322:12;
327:23; 329:1, 5; 330:16; 332:7; 336:12;
339:24
nd [3] 42:22; 97:25; 110:20
NDA [2] 4:6; 44:18
ne [1] 103:4
necessity [1] 251:24
needs [8] 43:22; 75:3; 76:4; 145:6;
168:13, 21; 258:3; 306:9
negative [13] 21:2; 73:1, 10; 83:23;
110:20; 119:18, 20; 138:8; 139:15, 24;
208:17; 236:17; 272:21
nerve [1] 28:2
net [1] 49:19
neurologic [1] 108:5
neurological [1] 287:4
Neutral [1] 237:15
neutral [1] 237:12
neutropenic [7] 52:20, 24, 25; 141:3, 8;
223:22, 25
neutrophils [1] 53:4
newer [1] 58:4
newly [1] 66:9
nice [5] 50:19; 62:18; 225:21; 227:25;
293:12
nicely [7] 49:10; 56:7; 106:13; 108:18;
229:12; 249:25; 266:20
nidus [1] 248:15
nine [6] 35:8; 40:24; 107:15; 153:23;
206:13; 283:25
Ninety-eight [1] 85:14
Ninety-one [1] 89:15
nobody [1] 295:15
noise [1] 264:3
non-comparative [1] 197:3

non-culturable [1] 248:11
non-meningitis [4] 265:21, 23; 266:17;
268:1
non-penicillin [2] 167:1; 288:25
non-PRSP [5] 134:1; 203:18; 204:9, 25;
279:21
non-severe [3] 70:6, 7, 9
non-suppurative [1] 28:22
non-suppuratively [1] 29:2
non-susceptible [1] 205:6
nonbacterial [1] 63:6
noncomparative [8] 19:14; 79:20; 80:4;
176:9; 240:8; 241:10, 13; 275:13
noncompliance [1] 41:14
noneffective [1] 159:10
Nonetheless [1] 122:10
noninferiority [2] 158:21; 275:9
nonresistant [2] 93:6; 205:7
nonsevere [1] 70:2
nonspecific [1] 321:25
nonsusceptibility [1] 32:5
nonsusceptible [2] 32:2; 233:23
nontreated [1] 226:1
normal [9] 52:24; 53:3; 236:2, 13, 23;
237:3, 13, 14; 302:13
Note [1] 185:23
note [15] 13:12, 18; 14:8; 83:13, 17; 84:5;
95:24; 96:5; 155:2; 186:16; 187:11;
198:19; 204:20; 206:9; 214:9
noted [12] 6:18; 16:10; 92:3; 100:19;
136:13; 235:22; 236:11, 22; 237:1, 10, 14
notes [2] 100:12; 228:8
notice [20] 24:19, 21; 25:13; 26:8; 32:14;
33:2; 34:3, 19; 35:6; 36:21; 37:12; 38:3;
40:15, 19; 64:10; 67:5; 70:25; 148:8;
154:17; 174:7
noticed [4] 78:20; 128:16; 193:7; 213:3
notwithstanding [2] 5:19; 177:13
November [1] 98:1
null [1] 72:21
Number [2] 75:7, 10
numerical [1] 221:21
numerically [1] 252:23
numerous [1] 55:17
nurses [1] 62:15

- O -

O'FALLON [19] 8:17; 147:5; 151:10;
159:4; 160:13, 20; 161:17; 165:19, 22;
166:5; 285:18; 290:7; 296:2; 297:6;
304:11; 323:16, 19; 326:20; 329:21
O'Fallon [19] 8:17; 147:4; 150:3; 158:23;
160:9; 161:8; 165:17; 167:18; 285:17;
290:6; 296:1; 304:10; 306:18, 25; 325:9;
326:19; 329:20, 24; 330:14
objective [6] 80:25; 81:6; 105:24; 106:11;
191:17; 319:21
objectively [2] 6:5; 61:7
objectives [2] 77:8; 79:24
Observations [1] 213:24
observed [11] 31:22; 92:11; 191:3, 4, 11,
15; 193:20, 24; 194:8; 223:23; 224:1
obstructed [1] 27:8
obstruction [1] 27:1
obtain [3] 16:13; 56:4; 224:11
obtained [6] 5:1; 20:25; 54:4; 98:6;
190:8; 337:19
obvious [1] 60:21
Obviously [1] 52:6
obviously [2] 111:21; 130:25

occur [2] 136:11; 261:19
occurred [3] 26:10; 104:14; 110:12
occurring [2] 14:4; 74:20
occurs [6] 142:10, 16; 187:9; 190:14;
241:3; 281:11
October [1] 37:8
odds [2] 96:18; 153:16
OED [1] 7:1
offer [1] 70:3
offered [1] 325:9
Office [1] 5:3
officer [1] 166:13
Oh [4] 114:19; 202:9; 235:16; 259:15
oh [1] 16:22
Okay [40] 114:23, 25; 116:7; 117:1;
121:9; 123:12; 127:4; 128:7; 133:9;
150:24; 151:9; 156:4, 13; 157:15; 162:11;
166:21; 174:3; 182:13; 191:23; 193:16;
194:18; 232:9; 234:24; 235:6, 16; 236:5;
237:6; 241:11; 269:7; 277:24; 284:3;
295:8; 304:11;
310:16; 324:4; 331:11; 332:21; 348:12,
22; 349:5
okay [8] 115:10; 157:14; 171:8; 259:15;
260:6; 282:2; 320:1; 325:14
old [3] 59:2; 73:14; 252:9
older [11] 34:22; 57:3, 7, 20; 66:23;
67:15, 22; 68:3; 88:16; 186:21; 338:5
OME [7] 28:20; 106:8; 143:23; 144:4, 7,
12, 14
omnicef [8] 94:8, 12, 14, 24; 95:7; 96:7;
153:12; 163:4
ones [20] 68:17; 121:3; 127:1; 144:2;
159:16; 164:8; 167:16; 204:16; 225:6, 7;
228:25; 233:7; 236:7, 8, 16; 248:23;
273:15; 276:12; 305:3
ongoing [2] 141:22; 172:4
onset [3] 68:8; 123:8; 263:13
ooze [1] 246:16
opaque [9] 60:25; 235:23, 24; 236:12, 23;
237:2, 8, 12, 15
open [15] 18:6; 112:23; 154:14; 182:19;
197:2; 231:20; 289:17; 314:7, 17; 326:24;
332:1; 335:8; 346:16; 347:19
opening [2] 4:8; 308:10
openness [1] 346:12
opinion [5] 103:22; 110:3; 322:1; 333:23;
340:2
opinions [2] 103:14; 128:12
opportunity [4] 43:6; 82:19; 102:24;
280:9
opposed [6] 80:11; 242:25; 294:16, 17;
309:12; 310:13
opposite [1] 25:22
opt [1] 263:5
optimally [1] 75:20
optimistic [2] 149:4; 228:21
optimize [1] 48:6
option [2] 277:3; 301:17
optional [1] 18:18
options [2] 319:17; 348:7
oral [5] 43:9; 55:17; 107:4; 110:21;
301:18
orally [2] 106:23; 111:22
oranges [1] 273:3
order [12] 18:23; 21:11; 54:9; 81:19;
141:3; 187:16; 189:5, 19; 286:4; 305:8,
10, 14
Oregon [1] 8:3
organized [1] 240:12
original [4] 235:8; 267:3; 292:8; 317:23

originally [1] 155:6
 ossicles [1] 29:2
 ostium [1] 30:1
 otalgia [2] 236:1; 237:8
 Otitis [3] 9:2; 27:22; 213:24
 otolaryngology [1] 177:19
 otorrhea [4] 201:1; 235:21; 236:9, 10
 otoscopic [3] 60:24; 75:3; 237:9
 otoscopy [2] 20:1; 70:23
 ought [2] 256:2; 304:12
 out-of-home [1] 27:6
 outcomes [22] 14:9; 22:12; 45:11; 60:17;
 61:15, 18, 23; 64:16; 69:16; 70:12; 75:19;
 76:13; 150:18; 151:23; 152:2; 213:5;
 216:10; 257:15; 260:4; 276:15; 289:4
 outer [3] 72:6; 73:2, 11
 outflow [1] 146:11
 outlet [1] 146:7
 outlined [1] 284:15
 outnumber [3] 73:25; 74:18; 251:3
 outnumbered [1] 73:6
 output [1] 97:12
 outs [1] 319:17
 outset [3] 104:9; 150:21; 212:21
 outside [1] 112:10
 outstanding [2] 90:18; 350:17
 outweigh [1] 169:20
 outweighs [1] 5:20
 Overall [1] 73:13
 overall [28] 77:18; 101:18; 117:17; 120:6;
 151:1; 152:22; 158:12; 164:3; 194:14;
 199:24; 201:3, 24; 202:23; 203:19, 20;
 204:2, 10; 207:12; 208:20; 209:3, 7, 12;
 210:14; 211:3; 230:12; 231:4; 307:7, 12
 overcome [2] 31:2, 9
 overestimation [1] 230:19
 overhead [2] 165:9, 15
 overheads [1] 160:11
 overview [7] 31:12; 42:22; 60:16; 80:3;
 155:15; 184:10; 219:5
 overwhelming [2] 264:4; 326:21
 overwhelmingly [1] 122:2
 owing [2] 322:10; 329:12

- P -

p.m. [6] 183:5, 6; 184:2; 269:13, 14;
 350:19
 package [12] 159:12; 238:18; 239:17;
 240:8, 17; 252:6; 267:3; 313:4, 12;
 315:19; 318:7; 337:8
 packages [1] 148:7
 packet [4] 41:11; 123:19; 174:9; 318:19
 page [5] 129:16; 174:9, 15; 188:9; 256:19
 paid [1] 103:2
 pain [4] 42:13; 66:24; 67:4; 70:1
 paint [1] 11:20
 pair [1] 26:16
 pairs [3] 119:17, 18; 121:14
 palate [1] 343:18
 palsy [1] 28:3
 pan [2] 224:19; 230:22
 panel [7] 6:25; 23:14; 40:9; 111:7;
 112:24; 186:17; 232:3
 paper [9] 11:15; 144:5; 161:10; 213:20,
 23; 215:9; 256:20; 333:13; 339:16
 papers [2] 163:24; 178:8
 paradigm [3] 17:9; 18:18; 278:9
 paragraphs [1] 15:24
 parallel [3] 146:16, 17; 178:1
 parameter [7] 48:8; 49:11; 50:11; 51:2;

79:25; 84:21; 272:16
 parameters [7] 47:1, 8; 50:9; 84:24;
 342:16; 346:22; 348:25
 Pardon [1] 168:7
 pardon [1] 296:6
 parent [2] 65:16; 116:12
 Parents [1] 311:18
 parents [6] 60:22; 63:3; 74:25; 78:19;
 263:5; 311:23
 Parklawn [1] 5:3
 Part [2] 93:2; 286:7
 part [16] 4:14; 70:14; 126:15; 133:5;
 135:25; 208:24; 216:8; 238:18; 239:16;
 245:21; 247:10; 275:20; 287:6; 338:8;
 342:13; 349:15
 PARTICIPANT [1] 157:11
 participant [1] 6:15
 participants [6] 4:18, 21; 6:5, 16, 19;
 44:11
 participate [1] 5:23
 participated [2] 5:7; 6:10
 participation [2] 5:20; 11:19
 parts [1] 46:14
 pass [3] 178:11; 329:21, 23
 passage [1] 178:13
 pathogen [23] 20:14, 18; 80:22; 83:22;
 87:23; 91:10, 24; 118:3; 137:7; 157:25;
 163:6; 187:10; 198:20; 199:20, 25; 200:5,
 12, 24; 214:5, 20; 215:3; 241:15; 290:5
 pathogenesis [3] 26:20, 22; 288:19
 pathogenic [1] 85:7
 pathogens [23] 19:17; 30:21; 41:15;
 56:16; 84:18; 86:23; 87:20; 94:1; 96:6, 13;
 102:3; 110:8; 111:25; 119:24; 158:17;
 181:15; 196:24; 198:14; 203:17; 242:9;
 272:24; 274:1; 289:1
 pathologies [1] 28:25
 pathology [1] 177:25
 Patients [5] 195:3, 16; 197:6, 18; 198:1
 pattern [3] 47:15; 100:4; 221:1
 patterns [3] 37:12, 15; 86:2
 paucity [1] 340:25
 pause [2] 277:4; 278:2
 pay [2] 190:13; 193:12
 PBPs [2] 254:14, 19
 PD [21] 79:13; 100:22; 102:5; 187:23;
 188:12; 193:4, 9; 194:14, 15; 224:8;
 268:6; 303:18; 327:7, 20; 328:1, 4;
 331:20, 23; 332:7; 349:22; 350:3
 PDPs [1] 128:21
 PE [1] 262:9
 peak [2] 48:19; 104:18
 Pediatric [6] 7:19; 9:1, 14; 106:17, 21;
 111:9
 pediatric [11] 36:20; 78:13, 15; 79:5, 17;
 81:9, 16; 84:14; 103:16; 185:5; 187:12
 pediatrician [1] 343:13
 pediatricians [5] 54:12; 106:1; 110:22;
 111:12; 144:10
 Pediatrics [1] 9:14
 pediatrics [3] 7:21; 106:24; 172:5
 Peds [2] 177:6; 311:16
 Pelsor [1] 188:8
 pen [9] 134:1, 8, 9; 208:7; 210:13, 18;
 233:11; 241:22; 327:6
 pen-resistant [4] 33:12, 15, 20, 24
 pencil [1] 256:20
 Penicillin [4] 229:14; 266:6, 8; 322:24
 penicillins [1] 51:14
 penicillins [6] 51:16; 52:21; 53:7, 11;
 54:5, 7

people [15] 148:12, 15, 22; 175:13, 19;
 261:17; 289:14; 308:11, 21; 323:21, 25;
 335:10; 341:16; 344:6; 345:14
 perceiving [1] 65:16
 percentage [11] 40:18; 122:9; 131:4, 14;
 137:11; 147:15; 148:9, 18; 159:22;
 227:17; 304:13
 percentages [14] 113:20; 131:7; 147:20;
 148:2, 5; 149:8; 155:20; 158:24; 159:23;
 161:18; 162:6; 207:1; 227:7; 278:21
 perennial [1] 146:21
 PEREZ [4] 4:11; 8:15; 112:8; 282:1
 Perez [2] 4:9; 8:15
 perfect [1] 63:16
 perfectly [1] 341:5
 perforation [3] 28:2; 201:2; 236:9
 perforations [1] 235:22
 perform [1] 20:11
 performance [2] 28:24; 61:10
 performed [10] 22:16; 28:18; 55:8; 80:15;
 100:23; 122:4; 135:3; 162:21; 195:11;
 240:18
 period [14] 37:8, 13; 47:23; 49:20; 53:19;
 67:9; 82:1; 99:14; 195:4; 216:16; 263:13;
 280:7; 305:1; 328:8
 periods [2] 50:4; 151:21
 peritoneum [1] 51:8
 persist [1] 273:13
 persisted [1] 208:12
 persistence [3] 65:12; 282:17; 285:25
 persistent [5] 42:10; 47:11; 48:1; 60:25;
 68:20
 persisting [2] 91:9; 146:9
 persists [3] 62:20; 142:17; 266:15
 person [1] 345:4
 persons [1] 281:18
 perspective [5] 13:2; 89:6; 184:7; 187:1;
 269:18
 perspectives [1] 268:10
 persuaded [1] 322:16
 persuasions [1] 10:19
 peruse [1] 35:2
 pessimistic [2] 149:3; 286:11
 pharmaceutical [1] 103:5
 pharmacist [1] 8:23
 pharmacodynamic [9] 38:23; 50:9;
 104:4; 105:15; 106:12; 112:21; 188:13;
 219:12; 223:15
 Pharmacodynamics [1] 46:21
 pharmacodynamics [4] 104:23; 105:4,
 20; 268:3
 pharmacokinetic [8] 38:20, 23; 57:6;
 79:16; 104:3; 112:21; 130:19; 224:10
 pharmacokinetic-pharmacod [1] 224:4
 Pharmacokinetics [1] 46:14
 pharmacokinetics [5] 57:2; 134:18;
 219:11; 223:14, 18
 pharmacologic [1] 46:23
 pharmacology [2] 46:13; 188:10
 Pharmacy [2] 9:5
 phase [1] 65:14
 phenomena [1] 91:15
 Phenomenon [3] 41:1; 63:8, 16
 phenomenon [8] 40:25; 63:18; 71:8;
 91:21; 92:20; 142:10; 248:10; 286:10
 Phil [2] 25:11; 39:2
 philosophical [2] 168:16; 169:8
 philosophically [2] 169:3, 19
 phonetic [5] 26:17; 31:4; 142:5; 190:23;
 266:8
 phrase [2] 245:22; 270:16

- phrasing** [1] 283:4
physical [1] 27:1
physician [6] 230:5, 14, 19, 231:16; 312:20
Physicians [1] 78:18
physicians [3] 78:21, 25; 337:18
physics [1] 68:13
pick [2] 194:20; 308:22
picking [1] 258:14
pictorially [1] 155:24
picture [6] 11:21; 193:16; 222:21; 227:19; 230:24; 272:4
pictures [1] 194:7
pie [1] 24:19
piece [2] 150:13; 249:8
pieces [1] 149:17
pipeline [1] 144:2
PISP [2] 167:7, 22
Pittsburgh [9] 5:7; 8:21; 24:16; 25:11; 39:3; 68:1; 70:8, 9; 263:10
pivotal [2] 184:14; 240:8
PK [22] 79:13; 100:22; 102:5; 187:23; 188:4, 12; 193:4, 9; 194:14, 15; 224:8; 268:6; 303:18; 327:7, 20; 328:1, 4; 331:20, 23; 332:7; 349:22; 350:3
place [7] 76:14; 144:20; 260:14; 263:6; 264:19; 332:9; 347:9
placebo [20] 23:2; 63:10; 66:21, 22; 67:3, 8; 68:2; 69:24; 70:3, 6, 15, 21; 71:5, 7; 76:12; 213:18; 214:2, 19; 215:10, 25
plan [1] 82:15
plane [1] 10:17
planktonic [2] 249:14, 22
planktonics [1] 249:24
planned [1] 81:9
plans [1] 78:24
plasma [4] 104:14; 189:16; 190:4, 6
play [1] 179:4
player [1] 174:2
playing [1] 250:22
playmate [1] 250:23
Please [2] 271:4; 323:18
plot [2] 37:5; 54:2
plotted [2] 91:12; 154:22
plugs [1] 224:9
plumbing [1] 146:23
plus [9] 44:4; 58:21; 111:3, 13; 140:14; 189:22; 208:19; 224:12, 20
pneumatic [1] 20:1
pneumo [16] 56:1; 110:24; 113:24; 117:6; 133:15; 136:16, 17; 137:21; 138:6, 19; 172:12, 17; 198:11; 208:8; 234:8; 292:15
pneumococcal [33] 26:10; 29:9, 10, 15; 31:13, 15, 18; 34:5, 14; 35:14; 37:1; 39:1, 7; 141:25; 176:16; 177:22; 179:21; 181:4, 6, 10, 17, 18; 311:16, 20; 315:3, 6, 8; 316:21, 25; 321:1, 6; 326:6, 11
pneumococcus [26] 24:13, 20; 25:1, 5, 20, 21, 25; 29:8; 33:19; 36:17; 56:8; 72:19, 25; 73:8; 105:8; 125:5; 161:12, 16; 176:20; 264:9; 273:12; 307:2; 309:17, 22; 316:13; 341:17
pneumolysin [1] 142:5
pneumonia [9] 29:12; 30:7; 48:13; 53:15, 21; 57:1; 180:4; 187:8; 223:25
pneumos [1] 125:18
podium [2] 7:4; 23:7
Point [1] 33:4
pointed [5] 22:9; 143:20; 186:17; 244:2; 267:5
Points [1] 48:23
points [16] 17:5; 18:14; 48:22; 57:15, 17; 62:9; 97:25; 120:8; 130:3, 10; 171:20; 190:14; 191:11; 243:5; 253:24; 347:23
Polyanna [8] 41:1; 63:8, 15; 91:21; 159:5; 161:9, 15; 286:10
poor [1] 41:2
populations [18] 13:2, 6; 81:20; 118:4; 151:19; 154:10; 229:9, 18; 230:9, 11; 231:8; 259:4, 8; 263:9; 272:24; 288:10; 292:21; 305:3
portion [1] 190:10
Portland [1] 8:2
poses [1] 223:8
position [2] 237:12, 15
positive [12] 108:3, 13; 110:20, 24; 119:4, 17, 21; 120:16; 145:11; 234:19; 242:1, 6
possibilities [2] 250:16, 24
possibility [2] 179:18; 181:2
post [8] 47:12, 13, 14; 73:23; 190:7; 281:8; 294:15; 328:14
potency [1] 47:5
potential [4] 4:21; 14:11; 141:14; 146:7
potentially [3] 61:23; 304:4; 319:12
POUPARD [2] 128:23; 269:2
Poupard [2] 128:23; 269:1
poured [1] 111:4
powder [1] 43:9
PP [1] 148:9
Practice [1] 9:5
practice [10] 7:22; 36:21; 65:24; 84:10; 172:5; 175:16; 265:3; 328:22; 336:20; 338:13
practices [2] 70:8; 144:11
practitioner [5] 312:25; 313:14; 336:16; 337:7; 339:18
PRCP [1] 291:25
pre [1] 328:14
pre-PRSP [1] 263:19
pre-treatment [1] 173:1
preceding [1] 155:18
precipitates [1] 142:9
precise [1] 147:25
preclinical [1] 300:18
preclude [1] 4:14
predict [11] 48:7; 56:23; 59:4, 9, 23; 92:25; 105:5; 136:2; 143:10; 144:18; 146:14
predictability [1] 231:1
predictably [1] 105:16
predicted [6] 91:21; 135:17, 18; 191:8; 192:2; 194:7
predicting [5] 91:14; 98:16; 105:12; 193:6, 10
predictions [9] 50:21; 59:22; 60:6; 100:22; 106:12; 140:6; 144:18; 188:16; 193:4
predictive [3] 87:6; 105:21; 117:8
predictor [2] 245:11; 264:12
predictors [1] 264:8
predisposed [1] 264:18
predisposes [1] 109:7
predominance [2] 137:3
predominant [1] 137:7
predominantly [1] 84:16
prefer [1] 340:9
preferable [1] 76:8
preliminary [2] 82:16; 197:24
preparation [9] 172:12, 19; 173:8, 17, 21, 24; 218:12; 265:5; 338:23
preparations [1] 334:13
prepared [4] 10:18; 118:7, 16; 269:15
preparing [1] 149:21
preschool [2] 30:10, 17
prescribe [1] 12:9
prescribing [1] 44:4
prescription [1] 175:17
presence [3] 42:11; 53:4; 109:5
present [24] 4:21; 23:5; 36:22, 24; 68:22; 69:3, 20; 77:3, 7, 9; 112:9; 131:19; 154:3; 167:19; 188:4, 5; 201:24; 202:14; 203:7; 218:20; 248:19; 269:23; 272:25; 299:4
presentation [18] 42:22; 60:9; 118:15; 133:6; 147:6; 180:12; 182:12; 183:3; 184:4, 11; 201:13; 216:14, 16; 218:13, 18; 219:5; 236:3; 237:24
presentations [11] 20:17; 112:17, 18; 124:17; 147:18; 200:23; 218:20; 231:24; 294:23, 25; 314:22
presenters [3] 112:24; 171:17; 218:19
presenting [5] 151:14; 152:19; 175:6; 184:7; 258:1
presently [1] 110:21
resents [1] 274:2
presumably [3] 61:24; 66:4; 74:9
presumed [12] 13:21; 127:10, 16; 199:5; 207:22, 24; 208:24; 209:1, 6; 210:21, 23; 260:22
pretty [15] 83:16; 107:16; 137:24; 138:1; 146:24; 174:18, 21, 24; 241:7; 250:9; 254:3; 307:1; 328:2; 341:8; 343:15
prevalence [4] 43:24; 124:17; 252:7; 343:12
prevent [3] 74:7; 249:5; 277:15
Prevention [1] 9:12
prevention [1] 281:10
previous [18] 6:21; 13:14; 44:8; 60:14; 63:14; 71:23; 146:1; 197:19; 200:18; 203:2; 204:2; 226:4; 244:10, 17, 22; 246:25; 255:15; 318:7
previously [3] 267:25; 341:9; 349:21
primaries [1] 283:6
primarily [2] 54:24; 80:5
Primary [3] 84:21; 284:7, 16
primary [32] 45:2; 47:1; 79:25; 80:25; 81:6; 84:25; 113:9; 124:8; 126:18, 22; 127:1, 5, 15, 25; 128:13; 155:23; 195:23; 198:22; 199:10; 246:22; 272:10; 282:20; 283:5, 23; 284:4, 22, 25; 286:16, 24; 287:24; 290:20; 291:11
principal [2] 108:24; 285:16
principles [1] 105:16
prior [16] 13:22; 44:25; 57:12; 81:13; 84:19; 93:8, 10; 127:18; 145:22, 24; 181:8; 200:17; 205:2; 256:16, 24
private [1] 172:5
privileges [1] 5:25
pro [2] 27:13; 143:2
probabilities [2] 160:6
probability [3] 61:2; 148:8; 161:23
problem [29] 29:17; 30:22; 31:6; 35:11; 40:3; 50:24; 129:4; 136:11; 159:6; 168:16; 169:8; 179:23; 223:8; 224:18; 228:16; 252:3; 257:16; 259:21, 24, 25; 272:9; 294:16; 298:12; 301:23; 302:24; 303:1, 2; 314:9; 343:22
problems [13] 61:9; 147:9; 148:21, 23; 255:19; 257:15; 259:23; 260:5; 261:4; 264:17; 273:13, 14; 293:9
procedure [2] 28:18; 262:4
process [12] 13:16; 27:15, 18; 28:10; 31:1, 9; 44:11; 76:19; 128:11; 140:19; 243:6

produce [1] 53:10
produced [1] 27:11
producing [16] 45:18; 77:14; 78:3; 101:3; 6, 9, 10; 102:13; 134:25; 135:7, 14; 80:18, 22; 185:20; 186:11; 314:25
product [22] 6:22; 11:23; 12:2; 17:13; 43:12; 78:16; 87:11; 100:25; 103:4; 179:2; 7; 311:12; 315:23; 340:11; 342:18; 343:2; 344:3, 18, 19, 23; 346:19
production [4] 72:8, 10; 145:25; 176:1
Products [1] 7:11
products [4] 6:14; 151:19; 185:19; 268:22
Professor [3] 9:4, 14; 46:5
professor [1] 7:20
profile [11] 73:2; 78:8, 17; 101:19; 102:15; 189:2, 4, 5, 23; 190:3; 191:14
profiles [1] 72:7
program [2] 97:19; 170:21
programs [1] 5:21
project [3] 220:13, 23; 341:22
projector [1] 154:15
prolonged [2] 95:1; 143:11
promise [2] 15:18; 226:24
promoted [1] 334:25
promotion [1] 346:5
promptly [2] 183:3; 269:10
promptness [1] 16:14
prone [5] 92:22; 96:3; 163:16; 262:8; 264:13
proof [2] 17:3; 226:16
propensity [1] 279:19
proper [1] 244:15
properly [1] 105:20
properties [1] 109:15
property [1] 326:6
prophylaxis [5] 21:24; 38:4; 82:3; 144:13; 197:20
proportion [4] 35:6; 305:9; 334:22; 348:19
proposal [5] 193:18; 337:10, 12, 13, 15
propose [2] 321:20; 327:16
proposed [17] 45:15; 170:2; 184:13; 186:2, 5, 8, 9, 18; 187:15; 219:3, 19; 271:20; 314:24; 318:11, 17; 326:10; 327:19
prospective [1] 84:12
prospectively [1] 154:5
protein [7] 52:3; 72:7; 73:2, 11; 132:2; 140:10; 266:23
proteins [2] 31:8; 176:7
protocol [48] 18:22; 44:21, 24; 80:10; 84:4; 85:20; 110:12, 15; 132:14; 138:23; 148:10, 13, 17; 149:2, 9, 14; 152:4, 7, 8, 10; 153:17, 24; 157:3; 158:16; 162:13; 174:24; 196:13; 201:14; 202:2, 8, 13, 20; 203:11, 20, 23; 207:12; 209:5, 16, 23; 212:5, 11, 18; 227:13, 20; 237:23; 238:3; 323:24; 324:16
prove [3] 42:19; 158:21; 331:9
proved [2] 193:20; 333:18
proven [14] 48:10; 79:8; 80:13; 85:22; 87:24; 90:6; 92:16; 96:14; 97:13; 139:3; 278:20, 21; 299:1; 334:17
proves [1] 295:15
Provide [1] 298:2
provide [8] 12:8; 15:12; 43:14; 99:24; 189:16; 217:18; 271:4; 312:23
provided [8] 44:20; 57:12; 99:4; 118:22; 119:3; 189:14; 214:10; 330:25
Providence [1] 8:2

provides [2] 128:22; 296:17
providing [2] 44:11; 51:19
proving [1] 80:17
provisional [3] 219:10, 25; 223:14
PRP [1] 151:5
PRSPs [1] 320:20
PSP [1] 263:23
PSRP [1] 168:19
PSSP [2] 205:12; 301:5
Psychological [1] 69:3
public [7] 6:4; 10:10; 43:24; 44:19; 182:19, 22; 243:21
publication [1] 54:23
publications [1] 143:18
publicly [1] 165:7
publish [1] 135:24
published [16] 18:13; 37:9; 48:13; 57:24; 111:8; 129:15, 16; 130:4; 176:24; 177:6, 18; 213:23; 264:23; 311:16; 329:1; 339:24
pull [3] 124:24; 131:6; 262:12
pulled [1] 157:20
Pulse [1] 122:7
pulse [3] 74:14; 125:17, 19
pump [1] 177:11
pure [2] 272:7, 11
purely [1] 103:21
purplish [1] 170:16
purpose [1] 319:19
purposeful [1] 182:16
purposes [1] 151:23
purulent [3] 235:21; 236:9, 10
pushing [1] 223:4
pushover [1] 138:2
puts [1] 228:18
putting [2] 243:14; 319:20
pyramid [1] 29:10

- Q -

qualified [4] 211:10; 212:8; 233:3; 234:13
quality [1] 268:22
quandary [2] 319:3; 336:25
quantities [1] 161:12
quarter [1] 15:16
quarters [1] 111:15
queries [1] 350:14
Question [7] 216:17; 217:5, 13, 23; 270:5, 25; 313:17
questioned [1] 5:22
questioning [1] 174:6
Questions [1] 112:24
questions [34] 22:7; 50:10; 51:1; 118:18; 121:9; 122:16; 125:1; 136:23; 143:6; 150:5; 160:22; 171:16; 176:14; 179:6; 184:22; 212:25; 213:2; 216:13, 15; 218:19, 20; 231:25; 232:1, 5; 251:22; 260:12; 264:21; 269:9, 16, 20, 23; 270:2; 321:23; 328:25
quick [6] 112:8; 121:24; 152:14; 232:5; 261:23; 324:10
quickly [6] 13:8; 64:15; 122:20; 321:21; 347:1, 2
quinolones [2] 33:18, 21
quinoline [2] 187:7, 12
quote [2] 13:4; 342:16

- R -

rabbit [3] 105:3, 5; 142:7
race [1] 196:8
raise [3] 22:7; 107:6; 173:20

raised [6] 60:13; 111:15; 118:20; 184:21; 216:2, 7
RAMIREZ [27] 8:7; 178:20; 180:9; 181:1; 182:2, 13, 14; 218:15; 231:22; 245:9; 257:12; 273:19; 274:4; 277:7; 285:5; 291:10; 294:20; 295:8; 301:23; 314:19, 22; 316:2; 320:22; 326:4; 330:2; 337:5; 339:1
Ramirez [20] 4:25; 8:7; 11:16; 178:19; 180:25; 257:10; 260:8; 273:18; 276:1, 9; 277:5; 285:4; 291:9; 294:19; 301:22; 314:20; 318:2; 326:3; 337:3; 338:24
randomization [7] 239:1, 10, 24; 240:22; 241:16, 17; 242:14
randomize [1] 262:10
randomized [4] 66:20; 71:8; 239:17, 21
range [22] 24:25; 53:11, 12; 55:19; 57:10; 76:1; 81:22; 86:1; 97:10; 101:13; 129:23; 190:18; 192:21; 193:12, 13; 195:6; 197:9; 207:14; 242:9; 312:6; 332:19; 342:2
ranges [3] 202:25; 210:16; 343:1
ranging [1] 239:14
rapid [3] 177:24; 348:1, 6
rapidly [2] 38:5; 147:7
rare [4] 41:21; 305:2, 6; 344:1
rarely [1] 129:2
ratio [9] 43:10, 12; 48:19; 73:14; 185:8; 188:24; 219:21; 265:5; 339:9
rational [2] 165:17; 307:5
rationale [6] 77:8; 79:6; 272:5; 306:21; 327:18; 341:16
rats [3] 50:15; 57:1; 225:4
reach [3] 25:23; 159:3; 192:1
read [7] 10:16, 17; 18:21; 151:3, 5; 248:14; 315:3
reads [2] 185:18; 186:8
real [8] 58:15; 72:24; 126:14; 161:23; 261:23; 289:12; 333:9; 336:25
realistic [3] 64:14; 108:16; 295:17
realities [1] 286:6
reality [1] 338:13
realize [5] 84:1; 140:7; 159:12; 243:4; 244:17
realized [2] 104:9; 109:16
realizing [3] 81:10; 155:8, 10
reason [15] 110:8; 130:9; 146:12; 201:11; 204:14; 211:17; 212:17; 214:1; 253:4; 254:13; 261:21; 275:25; 277:4; 307:11; 339:1
reasonable [6] 159:3; 161:24; 165:17; 287:23; 303:9; 306:2
reasonably [1] 141:10
reasons [14] 41:25; 75:7; 92:15, 16; 110:4; 144:13; 148:11; 211:19; 260:18, 25; 272:5; 284:14; 317:3; 325:17
reassignment [2] 90:5, 8
rebounded [1] 38:5
recall [5] 177:8; 232:11; 238:25; 239:18; 247:11
receive [2] 10:15; 65:24
received [12] 6:9; 14:17; 57:7, 8; 70:6; 93:9; 172:23; 197:6; 199:19; 200:17; 240:22; 262:3
recent [8] 22:3; 35:18; 57:8; 82:5; 143:17; 220:5; 252:1; 263:23
Recently [1] 111:11
recently [10] 21:20; 22:20; 31:17; 35:16; 44:13; 74:11; 105:10; 106:19; 145:17
recessed [1] 183:6
recognition [5] 10:25; 11:8; 252:7; 267:5; 303:17

recognize [4] 10:4, 21; 39:6; 258:3
recognized [2] 123:18; 335:1
Recognizing [1] 342:19
recognizing [2] 273:5; 350:1
recollection [1] 251:5
recolonizes [1] 282:14
recommend [6] 147:21; 218:7; 258:19; 305:21; 310:20; 312:3
recommendation [4] 12:20; 315:18; 320:8; 331:19
recommendations [3] 78:24; 260:11; 313:19
recommended [7] 19:4, 15, 21; 40:10; 111:4, 10; 186:22
recommending [2] 78:25; 334:18
recontact [1] 99:23
reconvene [3] 112:6; 183:2, 6
record [9] 4:14; 5:5; 6:18; 111:2; 112:13, 14; 252:12; 269:13, 14
recorded [1] 269:19
recording [1] 289:24
records [1] 124:24
recover [1] 251:20
recovers [1] 48:2
recovery [1] 251:19
recruit [1] 42:12
recruited [1] 197:18
recruitment [1] 273:25
reculture [1] 261:14
recurrence [17] 13:13, 18, 25; 24:7; 71:4; 92:1, 7, 25; 96:3; 204:6; 255:23; 256:24; 263:9; 274:3; 290:2, 13; 303:1
recurrences [12] 69:13; 71:3, 6, 19, 22; 72:1, 3; 114:6; 122:12; 146:18; 255:16
recurrent [22] 21:21; 24:9; 79:2; 82:5; 92:15; 93:13; 95:14; 96:1; 106:3; 109:7, 20, 21; 110:6; 143:22; 144:8, 11; 146:22; 163:19; 255:14; 263:14; 264:10; 272:15
recurring [3] 92:22; 258:12; 263:12
red [9] 20:3; 25:16; 73:21; 74:16; 235:23, 25; 236:21; 237:9, 15
reduce [1] 41:20
reduced [1] 246:1
reduces [1] 53:4
reduction [1] 38:3
refer [1] 275:5
reference [2] 147:13, 14
referred [1] 252:4
referring [3] 49:21; 121:20; 177:17
reflect [2] 15:6; 175:8
reflected [1] 25:5
reflecting [1] 336:19
reflectometry [1] 90:7
reflects [4] 54:5; 89:16; 137:4; 138:3
refresh [1] 264:24
refresher [1] 15:13
regard [19] 4:13; 15:23, 24; 16:17; 18:2; 19:2; 20:6, 24; 22:18; 104:23; 118:7; 143:17; 144:5; 171:24; 265:4; 266:1; 271:10; 307:14; 321:18
Regarding [3] 16:15; 151:11; 299:21
regarding [4] 5:25; 16:25; 22:8; 257:12
regardless [5] 91:24; 118:2; 259:20; 315:7
regards [4] 176:2, 4; 290:4; 306:9
regimen [10] 46:17; 51:3; 57:3, 4, 21; 58:1, 5; 59:2; 328:24
regimens [6] 48:5, 16, 20; 55:20; 241:8; 301:10
regrow [2] 245:25; 248:9
regrowth [1] 247:21

regular [1] 116:11
regulated [1] 4:19
reimburse [1] 10:11
reinfect [1] 291:2
reinfection [17] 42:2; 92:7, 10; 108:22; 113:17; 122:13; 261:16; 262:18, 22; 279:24; 280:4, 11; 282:18; 283:1; 292:7; 294:16; 296:23
reinfections [7] 257:9, 16; 263:18; 264:4; 284:10; 285:8; 292:14
reintroducing [1] 325:19
reiterate [2] 210:22; 314:6
rejected [1] 249:19
relapse [29] 21:18; 22:17; 72:24; 91:6, 7; 108:21; 116:2; 117:21; 122:14; 124:7; 126:8; 249:15; 255:8; 256:9; 260:25; 261:16, 19; 262:18, 20, 21; 279:19, 22, 25; 280:2, 3, 11; 283:1; 291:3; 292:6
relapses [18] 72:14, 19; 73:3, 14, 21, 25; 74:17, 19; 115:20; 251:4; 257:9; 261:14; 263:18; 264:2; 280:5; 284:10; 285:9
relapsing [1] 258:12
relate [1] 69:2
Related [1] 279:15
related [19] 23:17; 39:18; 51:15; 61:25; 69:15; 92:19; 121:12; 129:6; 150:5; 155:17; 156:6; 169:7; 226:9; 227:1; 231:24; 279:16; 280:23; 285:9; 296:22
relates [2] 124:15; 209:20
relating [1] 60:11
relation [1] 327:21
relationship [13] 39:22; 46:22; 48:18; 49:1, 4; 54:17; 55:11; 56:10; 62:4, 24; 71:12; 204:9; 223:20
relationships [1] 177:9
relative [5] 139:14; 156:8; 158:25; 267:17; 280:11
relatively [5] 39:13; 48:2; 74:4; 157:17; 305:6
release [3] 27:11, 12; 142:14
released [1] 249:25
relevance [1] 22:11
Relevant [1] 142:6
relevant [9] 9:24; 20:19; 126:7; 180:10; 182:22; 216:19; 243:7; 270:7; 280:7
reliable [1] 194:10
relief [1] 67:4
Reller [11] 8:12; 42:24; 118:6; 127:4; 150:8; 164:13, 24; 218:23; 244:25; 270:1; 320:15
reluctant [1] 151:24
remain [3] 33:18; 61:11; 141:15
remainder [1] 45:25
remained [1] 115:19
remaining [2] 48:15; 206:14
remarkable [4] 26:21; 28:11; 36:3; 255:25
Remember [4] 97:2; 149:15; 227:21; 311:19
remember [11] 68:13; 114:12; 149:13; 152:14; 159:7; 178:12; 249:12; 251:1; 255:7; 294:22; 334:12
remembered [1] 109:17
remind [5] 111:1; 229:6; 242:23; 267:13; 281:24
reminded [1] 25:14
remission [1] 161:13
removed [1] 293:25
render [2] 107:19; 322:1
rendering [1] 340:2
reopening [1] 76:17

reorient [1] 215:15
repeat [26] 20:8; 44:15; 45:1; 80:15, 21; 82:22; 85:21; 114:5, 13; 118:7, 23; 119:12; 120:1, 6, 7, 14; 121:2; 122:4; 134:10; 208:11; 217:8; 234:14; 270:17; 277:8; 279:14; 287:15
repeated [5] 109:22; 119:9; 120:4; 198:2, 10
Repeating [1] 291:22
replicate [1] 27:10
replicated [1] 213:1
report [5] 133:23; 211:13; 212:7; 230:4, 13
reported [6] 4:17, 20; 6:3; 31:21; 162:20; 212:9
reports [1] 44:3
represent [6] 21:3; 48:23; 151:20; 220:5; 244:5
representation [1] 25:7
representative [1] 11:7
represented [3] 32:12; 84:3; 320:25
represents [4] 15:16; 48:21; 70:10; 150:25
request [4] 5:2; 320:3, 11, 16
requested [7] 317:23; 320:10, 11, 18, 25; 321:3, 5
requests [1] 320:23
require [4] 51:14; 116:23; 337:20; 339:16
required [20] 16:10; 17:11; 18:25; 49:22; 50:11, 15, 16; 52:19; 53:5; 56:19, 20; 63:25; 144:19; 145:1; 192:1; 265:13; 275:6, 23; 327:21; 336:11
requirement [2] 192:17; 319:8
requires [5] 10:9, 20; 52:14; 54:8; 219:8
Research [4] 4:20; 9:2; 77:1; 188:3
research [2] 103:9; 250:7
researchers [1] 24:3
resembles [1] 57:16
reside [1] 231:3
residual [1] 145:22
resistance [44] 30:20, 24, 25; 31:2, 6, 20; 33:3; 35:21, 22; 37:12, 16; 50:25; 93:4; 107:2; 169:7; 173:15; 174:14; 175:3; 176:4, 5; 178:25; 179:8; 180:1; 181:4, 6, 10, 17, 19; 266:18; 267:6; 288:19, 24; 294:3; 302:20, 25; 315:7; 316:22; 321:1, 7; 327:3; 331:20; 343:23; 346:8, 17
resisted [1] 31:7
resistent [4] 210:19; 316:13; 332:12; 335:12
resolution [7] 38:17; 39:4; 41:3; 88:17; 154:16, 20; 300:24
resolve [3] 39:8; 86:18; 123:12
resolved [1] 323:10
resolves [1] 14:25
respect [6] 6:2, 19; 123:10; 150:13; 291:6; 311:15
respective [1] 306:10
Respiratory [1] 9:9
respiratory [15] 26:1, 5, 6, 11, 12, 15, 17, 23; 27:4; 36:11; 56:15; 78:5; 99:7; 102:14; 225:3
respond [5] 65:25; 230:21; 268:2; 321:12; 345:1
responses [8] 166:1; 201:25; 203:9, 12; 211:3; 213:5, 8; 214:13
responsible [1] 28:16
responsive [1] 76:14
rest [10] 32:17; 83:16; 99:7; 108:21; 158:17; 190:14; 198:14; 227:25; 296:13; 314:12

restate [1] 346:15
restoration [1] 178:17
restrictive [1] 338:19
result [8] 21:2; 29:2; 192:15; 194:10; 211:20; 223:20; 230:4; 313:11
resulted [1] 247:1
resulting [1] 28:24
results [49] 45:5, 6, 9; 49:19; 55:11; 59:24; 77:10; 85:10; 100:21; 107:20; 112:22; 118:24; 170:14; 190:2; 191:1; 196:22; 199:18; 201:7; 202:15, 18; 203:3, 7, 8; 204:1, 2, 23; 205:23; 206:3; 207:6, 7, 18; 208:23; 209:2, 14, 19; 210:12; 213:9; 214:19; 215:18, 19, 20; 227:1; 238:12; 241:11, 12, 13; 245:12; 268:6; 313:9
retap [1] 260:2
retapped [7] 119:16; 134:5; 198:13, 15; 208:9, 10; 210:4
retards [1] 190:23
retreatment [1] 294:18
return [2] 112:16; 178:14
returned [1] 173:1
revealed [1] 40:21
revealing [1] 25:10
reverse [3] 119:22; 187:16; 287:7
review [23] 5:13; 11:23; 12:14; 42:19; 46:9; 74:24; 75:18; 76:20; 82:15; 90:5; 98:2; 118:14; 121:19; 127:13; 166:13; 168:2; 184:21, 22; 216:3, 13; 218:10, 11
reviewed [9] 44:15; 108:18; 126:18; 127:8; 132:14; 244:3, 4; 255:11; 274:16
reviewer [4] 7:13; 174:8; 188:7; 218:25
reviewing [3] 119:2; 152:14; 212:23
revised [1] 332:6
revising [1] 139:23
revisit [2] 168:1; 270:21
honda [1] 37:7
Rich [1] 9:9
rid [4] 148:12, 13, 14; 180:22
rifampin [3] 33:22; 37:25; 38:10
Right [22] 114:21; 115:10; 117:2; 123:17; 155:1; 165:5; 169:25; 173:14; 174:3; 227:21; 232:18, 23, 25; 234:11, 17; 246:22; 252:11; 266:13; 273:11; 283:10; 310:19; 350:4
right [48] 7:3; 35:5, 17; 39:25; 67:17; 68:11; 83:11; 86:5; 106:1; 122:23; 130:12; 16; 133:23; 134:9; 137:18; 151:2; 154:17; 157:14, 15; 168:18; 171:10; 174:13; 182:18; 228:1; 229:22, 24; 231:25; 232:7; 233:14; 236:9, 23; 237:1, 13, 14; 243:12; 244:7; 250:10; 264:25; 294:22; 295:15; 298:20; 307:18; 308:15; 310:24; 314:23; 319:12; 320:14; 334:8
right-hand [2] 32:24; 307:24
rightly [1] 70:2
rigid [5] 17:20, 21; 278:17, 20, 22
rise [3] 32:2, 9; 142:9
rising [2] 348:1, 6
risks [2] 292:1; 338:11
road [1] 281:12
Robert [1] 10:25
Rocephin [1] 89:24
rocephin [8] 88:18; 90:1, 13; 158:1, 4, 11; 160:12; 238:19
Roche [2] 238:21; 241:9
ROVD [7] 9:4; 286:22; 288:13; 317:17; 319:18; 327:10; 329:17
Rodvold [9] 9:4; 11:5, 6; 282:3; 286:21; 288:12; 297:15; 307:16; 327:9
ROLDVOLD [2] 131:23; 297:16

Roldvold [1] 131:22
role [10] 77:3; 102:20; 141:22; 179:4, 7, 22; 218:1, 3, 4; 287:9
Ron [2] 54:25; 74:12
Room [1] 5:3
room [2] 23:16; 75:11
Roughly [1] 240:22
roughly [6] 58:11; 152:23; 155:12; 190:15; 202:6; 245:4
round [2] 23:19; 282:22
routinely [2] 144:12; 338:14
RSV [1] 26:16
rule [3] 159:23; 304:21; 324:13
ruled [1] 96:1
rules [1] 166:1
ruling [1] 160:5
running [1] 348:7
ruptured [1] 21:20
rural [1] 264:10

- S -

sacrificed [1] 53:16
safe [3] 12:10; 111:16; 322:2
safely [2] 344:22; 346:20
Safety [2] 101:18; 348:17
safety [20] 45:11; 77:16; 78:8, 17; 101:18; 102:15; 139:6, 7; 184:18; 211:7, 10; 212:9, 14; 217:24; 271:13; 313:25; 315:22; 322:9; 323:1; 329:11
salute [1] 76:16
sample [23] 63:19; 64:3, 7, 9, 11, 12; 75:1; 147:23, 25; 159:11; 160:21, 25; 161:22; 165:23; 190:6; 239:5; 246:14; 248:25; 305:9, 10; 307:13; 308:5; 309:19
samples [4] 104:20; 137:18; 147:19; 305:5
satisfy [1] 302:17
Saturday [2] 109:1
save [1] 182:17
saying [19] 159:25; 166:2; 228:21; 258:2, 3, 17; 267:12; 276:8; 319:23, 25; 332:16, 24; 333:15, 17; 334:16; 342:14, 15; 344:5; 346:18
Scandinavia [1] 66:8
scatter [2] 37:4; 49:8
scattergram [1] 49:2
scheduled [10] 82:23, 25; 116:11; 182:15, 18, 19; 183:2; 195:15; 197:23; 262:8
Scheid [1] 55:6
scholarly [1] 42:19
School [2] 8:5; 9:3
school [5] 28:24; 30:14; 61:9; 68:14
Sciences [1] 8:3
scientific [5] 60:11; 61:11; 76:20, 22, 23
scientifically [1] 219:14
score [1] 66:24
scoring [1] 64:24
Scott [4] 8:25; 23:8; 143:6; 310:24
screen [1] 5:12
screened [1] 87:24
se [1] 95:6
sea [1] 37:1
searched [1] 92:13
season [1] 99:7
seasonal [1] 92:24
seats [1] 112:16
secondaries [1] 283:6
Secondary [1] 284:4
secondary [23] 84:24; 128:1; 167:5;

199:8; 272:10, 14; 283:8, 24; 284:1, 21; 285:1; 286:17, 25; 287:10, 13, 24; 288:13; 289:9; 290:20; 291:12, 14, 23; 292:20
Secondly [1] 44:2
secondly [2] 56:8; 156:10
seconds [1] 240:16
Secretary [2] 4:9; 8:15
secreting [1] 28:14
secretary [1] 28:14
section [1] 313:6
security [1] 344:7
sees [14] 56:7, 11; 57:16, 18; 58:2; 88:8; 91:20, 23; 96:22; 99:11; 140:24; 174:15; 222:23; 227:15
select [5] 13:9; 95:14; 161:15; 276:18, 25
selected [3] 13:11, 13; 44:5
Selecting [1] 343:14
selecting [5] 96:2; 255:20, 21, 22; 258:7
selection [3] 12:19; 216:9; 255:20
self-inoculation [1] 113:17
semantic [1] 335:7
sense [17] 156:8; 166:3; 174:7; 203:9; 204:4; 213:17; 244:12, 17; 255:17; 279:23; 281:13; 287:2, 18; 317:10; 345:16, 23; 346:11
sensitive [4] 33:15; 40:16; 41:16; 306:22
sensitivity [4] 39:24; 143:1; 144:8; 320:1
separate [5] 75:9; 169:25; 229:9; 266:10; 279:17
separated [2] 25:14; 221:24
separately [2] 55:4; 229:19
separates [1] 229:12
sepsis [1] 29:23
September [1] 106:18
series [7] 46:1; 74:12; 86:19; 87:17; 93:24; 155:19, 23
serious [3] 211:12, 13; 212:16
serotapping [1] 125:18
serotype [5] 115:25; 116:1; 121:14; 122:1; 125:19
serotypes [5] 31:15; 35:15; 37:2, 11; 116:3
serotyping [2] 72:5; 74:15
serum [9] 46:18; 54:18; 74:4; 104:10; 131:4; 135:18; 136:8; 140:17, 24
serve [2] 10:10; 313:13
service [2] 10:25; 11:8
sets [14] 45:6; 126:24; 192:4, 12; 219:7; 222:6, 25; 223:4; 229:19, 23; 230:7, 23; 273:16; 289:2
setting [7] 165:16; 226:21; 245:7; 278:6, 22; 305:23; 307:6
settle [1] 309:16
seven [34] 24:11; 37:10, 25; 66:24; 76:1; 86:21; 87:1; 107:15; 145:19; 157:2; 172:11; 173:7, 9, 16, 21; 175:9, 20; 185:12, 17; 187:22; 188:24; 195:4; 197:5; 211:11, 12; 216:5; 225:7, 20, 24; 226:2, 7; 238:23; 239:13; 311:20
seven-day [1] 82:1
seven-to-one [1] 157:16
Seventy [1] 137:1
severe [8] 25:14, 17, 21; 39:4, 6; 70:1, 3, 4
Shaking [1] 332:20
shaky [1] 307:23
share [5] 69:19; 152:1; 165:11; 169:12; 300:3
shared [2] 40:12; 165:6
shed [1] 165:12
shift [3] 66:18; 252:17; 266:25

restate to shift

shifted [1] 67:16
shifting [1] 265:24
shifts [1] 347:18
shipping [1] 137:20
shoring [1] 152:22
show [37] 31:25; 32:18; 37:4; 48:11; 50:17; 51:9; 54:22; 55:13; 56:25; 57:5; 59:24; 63:7; 64:13; 70:13; 76:5; 106:16; 108:2; 113:16; 118:11; 120:7; 137:25; 140:24; 149:25; 150:15, 17; 155:12; 158:25; 165:22; 169:15, 18; 200:13; 221:21; 252:20, 22; 286:12; 300:8; 312:13
showing [20] 32:4; 36:3; 39:3; 49:11; 52:13; 57:25; 58:20; 63:14; 111:13; 122:11; 149:12, 14; 152:24; 159:5; 164:7, 18; 170:7; 171:4; 178:8; 247:6
shows [11] 34:25; 49:1; 63:23; 65:23; 66:1; 76:13; 115:24; 175:3; 190:2; 256:15; 325:25
siblings [4] 92:20; 93:13; 257:8; 301:12
sic [1] 188:12
sight [1] 27:14
sign [1] 263:6
significance [2] 25:24; 36:9
significant [11] 28:25; 39:13; 52:11; 62:23, 24; 67:1; 70:16; 71:22; 93:11; 108:14; 212:3
significantly [2] 108:7; 226:5
signs [8] 27:20; 38:18; 42:7; 64:25; 96:17; 116:15; 124:10; 278:19
simple [5] 243:8; 265:24; 321:2; 322:7; 343:15
simulated [1] 57:2
simulations [1] 130:20
sincerely [2] 11:2, 9
single [14] 26:24; 105:22; 137:17; 177:8; 238:19, 21; 239:19, 24; 240:3, 9, 19; 241:5, 17; 338:1
sinus [2] 30:1; 51:10
sinusitis [6] 29:24; 54:21; 55:7, 14; 56:10, 17
sister [1] 250:22
sit [1] 121:13
site [9] 46:20; 75:14; 83:7; 113:13; 126:7; 133:22; 137:17; 138:3; 267:19
sites [8] 51:6; 80:6, 21; 132:17; 137:4; 139:4; 197:4; 329:8
sits [1] 222:17
sitting [1] 290:10
situation [10] 42:1; 69:6; 105:1; 107:21; 141:9; 192:15; 193:10, 22; 305:24; 312:22
situations [5] 14:23; 50:22; 192:4; 194:12; 298:18
Six [1] 114:24
six [39] 20:9; 21:22; 24:21; 30:15; 61:21; 70:25; 71:2; 75:25; 80:16, 18, 22; 82:18, 21; 84:22; 85:22; 87:3, 22; 89:21; 91:15; 98:9; 107:10; 114:11; 115:10; 119:1, 5, 13; 134:12; 157:23; 163:25; 171:15; 177:18; 199:2; 206:23; 236:21; 264:13; 275:15; 295:1, 7; 320:24
six-day [1] 251:21
Sixty-one [1] 214:8
size [8] 63:19, 25; 153:2; 154:9; 165:24; 239:5; 308:6, 15
sizes [8] 64:3, 7, 9, 11, 12; 75:1; 160:25; 161:22
skill [1] 109:10
skipped [1] 253:20
slant [2] 273:5, 6

slice [2] 169:16; 327:18
Slide [17] 30:8; 32:20; 33:17, 25; 34:16; 35:25; 36:14; 37:3, 23; 38:11, 24; 39:15; 40:8, 23; 41:8; 133:9; 235:16
slides [18] 60:16; 69:20; 87:17; 103:21; 118:16; 128:17; 137:25; 143:21; 150:23; 155:11, 18; 156:6; 164:19; 166:20; 205:21; 240:13; 252:21
slight [3] 137:3; 254:19; 263:25
slightly [8] 64:23; 69:20; 91:20; 94:15; 100:12; 128:12; 138:2; 222:21
slippery [1] 303:8
slope [1] 303:8
slow [1] 237:19
smaller [5] 158:15; 161:22; 251:9; 305:5
SmithKline [5] 6:8, 9, 11; 172:1; 177:2
so-called [4] 40:10; 49:18; 193:11; 256:1
soft [1] 51:8
solely [1] 257:8
solid [1] 347:15
solidified [1] 323:15
Somebody [1] 249:11
somebody [5] 136:14; 167:19; 261:14; 262:15; 312:12
somehow [5] 191:15, 19; 194:8; 283:8; 346:5
someone [4] 125:7; 235:12; 312:2; 316:16
somewhat [7] 67:16; 90:12; 151:20, 24; 177:16; 187:16; 286:11
somewhere [7] 26:5; 53:8; 131:15; 149:1, 4; 153:9; 249:13
SOPER [7] 8:10; 285:7; 290:23; 295:13; 302:23; 326:16; 330:1
Soper [6] 8:10; 285:6; 290:22; 295:12; 302:22; 326:15
sophisticated [1] 26:4
Sorest [1] 15:12
SORETH [30] 7:6; 15:15; 118:6; 164:24; 165:9, 14; 168:1; 238:17; 240:15; 243:8; 244:21, 25; 246:8; 270:1; 275:1; 276:4; 277:5; 278:3; 281:21, 24; 295:6; 313:2, 21, 23; 315:12; 320:13; 321:11; 330:23; 331:2; 338:8
Soreth [27] 7:5, 7; 12:14; 23:13; 42:25; 44:8; 75:12; 76:16; 81:21; 118:5; 165:8; 269:22, 25; 271:22; 274:16; 279:7; 281:20; 312:17; 313:1, 18; 317:6; 318:13; 320:12; 321:10; 322:11; 330:19; 339:19
Sorry [1] 255:2
sorry [17] 16:22; 119:13; 127:22; 164:13; 197:25; 203:19; 205:2; 211:24; 232:18; 241:23; 242:2, 10, 16; 271:19; 286:8; 322:20
sort [7] 55:10; 140:5; 232:7; 272:4; 312:9; 342:5; 344:4
sought [1] 203:15
sound [1] 289:23
sounded [3] 123:15; 245:19; 276:1
sounds [5] 126:16, 22; 285:21; 296:6; 297:6
source [2] 130:2; 249:15
sources [2] 79:4; 122:3
Sousan [2] 218:24; 232:6
South [2] 8:11; 32:16
span [1] 227:6
sparse [1] 191:4
speak [7] 12:25; 121:22; 224:6; 243:14; 251:12; 321:17; 347:14
speaker [1] 6:8
speakers [4] 6:3; 46:1; 60:14; 78:11

speaking [2] 15:18; 34:2
special [3] 259:4, 7; 273:14
specialty [1] 53:1
species [3] 50:12; 72:13; 73:7
specific [15] 16:17, 24; 17:20; 18:5; 19:8; 23:4, 10; 49:13; 152:2; 279:1; 306:24; 307:8, 10; 309:10; 315:16
Specifically [1] 197:17
specifically [19] 16:1; 18:3; 44:17, 22; 49:18; 118:19, 22; 130:23; 133:12; 134:17, 22; 166:23; 214:18; 217:1; 231:25; 254:7; 269:16; 289:3; 301:2
specificity [2] 40:3, 7
specifics [1] 167:22
specified [1] 295:6
specify [2] 295:3; 333:12
specimen [1] 262:12
spectrum [1] 338:16
spend [2] 75:12; 195:1
spinal [5] 105:13, 15; 108:1, 8, 9
split [2] 169:2, 23
sponsored [1] 164:16
sponsors [9] 11:25; 19:10; 20:8; 21:6; 168:15; 219:8; 278:11; 303:4; 331:14
spontaneous [14] 39:3; 41:3; 86:20; 88:17; 154:16, 20; 161:13; 300:23; 306:25; 307:1; 310:3, 25; 311:3, 7
spontaneously [4] 39:7; 86:18; 94:20; 309:24
spread [2] 36:16; 37:14
spreading [2] 35:22; 37:17
squares [2] 55:14; 56:9
staff [1] 312:19
stage [1] 301:16
stand [1] 103:11
standard [11] 38:16; 103:24; 107:11; 136:6; 140:14; 147:1; 268:23; 277:10, 12; 299:2; 319:5
standardized [1] 252:16
stands [1] 275:19
Staph [1] 119:25
start [7] 48:3; 50:21; 59:4; 102:25; 150:15; 219:24; 324:20
started [5] 114:19, 20; 159:7; 304:6; 313:3
starting [3] 46:2; 48:21; 329:9
starts [2] 55:22; 58:3
stat [1] 230:8
State [1] 9:17
state [9] 20:21; 104:12; 226:19; 229:22; 250:9; 282:7, 8; 287:8; 301:20
stated [4] 17:20; 81:6; 179:1; 244:3
statement [13] 4:9; 5:1; 21:5; 103:1; 111:8; 139:14; 245:14; 289:24; 314:13; 322:8; 333:21; 347:24; 349:3
statements [2] 103:22; 290:12
States [9] 28:19; 32:3, 13; 78:18; 80:5; 101:22; 311:21; 348:19; 349:16
states [2] 17:7; 275:2
static [4] 49:18, 22; 52:5, 19
stating [1] 345:8
statistical [2] 155:9; 308:14
Statistically [2] 93:17; 170:19
statistically [7] 67:1; 93:7, 8, 9, 10; 155:3, 13
statistics [1] 149:16
status [2] 260:21; 261:8
stay [1] 247:8
steady [1] 104:12
steered [1] 138:21
sterile [10] 72:15; 108:8, 22; 145:19;

236:4, 14; 237:3, 16; 249:1
sterility [1] 249:7
sterilization [2] 38:15; 146:13
sterilized [1] 304:14
Steve [2] 8:22; 11:17
tilted [1] 169:10
stock [1] 103:10
stools [2] 212:6
stop [1] 23:7
stopping [3] 61:25; 74:2; 280:1
stops [1] 91:2
straight [2] 270:24; 317:19
strain [17] 37:22; 72:11, 13; 122:8;
 133:14, 15; 134:2, 8, 9; 177:22; 178:10;
 235:8; 254:22; 296:25; 336:7, 8, 17
strategies [3] 22:5; 197:16; 273:25
stratification [1] 303:16
stratifications [1] 284:18
stratify [2] 291:25; 301:11
stream [1] 29:22
Strep [34] 9:25; 23:10; 35:10; 56:1; 80:16;
 110:11, 24; 113:24; 117:6; 118:3; 125:18;
 133:15; 136:16, 17; 137:21; 138:6, 19;
 152:19, 24; 172:12, 17; 186:12; 187:8;
 198:2, 11; 199:21; 208:7; 210:13, 19;
 214:8; 234:7; 271:11; 292:14; 298:4
streptococci [1] 222:12
stressed [5] 16:16; 17:2; 19:3; 20:7, 12
stretch [1] 131:10
strict [2] 202:12; 238:1
strictly [1] 161:1
strong [9] 86:5; 91:16; 96:22; 99:16;
 101:4; 171:2; 175:4; 244:18; 297:4
strongly [6] 17:22; 18:19; 31:14; 105:19;
 124:15; 139:22
struggle [2] 15:4; 308:8
stuck [1] 327:11
studied [6] 106:24; 145:6; 162:20; 263:9;
 291:1; 315:20
Study [6] 79:17, 24; 157:22; 158:1, 4;
 214:14
studying [4] 15:25; 18:13; 71:12; 289:15
sub-MIC [1] 47:13
subacute [1] 28:5
subcategory [1] 152:16
subgroup [3] 205:4, 11, 13
subgroups [2] 205:10, 16
subject [5] 27:23; 189:16; 193:25;
 245:16; 350:18
subjected [1] 278:13
subjective [1] 106:9
subjects [5] 189:12, 13; 193:19, 25
submission [1] 188:11
submissions [1] 194:16
submit [3] 69:23; 74:2; 219:8
submitted [14] 4:16; 44:24; 121:19;
 123:20; 130:24; 184:15; 187:15, 24;
 219:2; 220:2; 233:2; 246:24; 275:14;
 318:19
submitting [1] 5:2
subpopulation [1] 315:13
subsequent [5] 42:20; 44:19; 125:12;
 178:13; 260:13
subsequently [2] 231:25; 320:7
subset [19] 89:1; 90:25; 92:4, 11; 93:17;
 4:19; 95:19; 117:11, 17; 118:8; 121:4;
 131:5; 153:3; 162:12, 15; 170:3, 5; 281:5;
 332:16
subsets [4] 155:13; 207:8, 15; 308:23
subsetting [1] 209:3
substance [1] 244:8

substantial [3] 286:12; 334:22; 347:15
substantiate [1] 28:8
subtest [1] 189:2
successes [12] 19:2; 40:1, 2, 6; 41:24;
 118:1; 201:9, 19, 21; 202:16; 210:8; 305:9
successful [6] 42:9; 91:24, 25; 136:24;
 138:13; 162:17
successfully [2] 29:20; 239:12
succession [1] 292:25
sudden [2] 316:7, 20
sufficient [6] 12:8; 131:1; 193:6; 249:4;
 328:8, 18
suggest [7] 50:1; 51:10; 268:14; 275:11;
 283:23; 307:7; 330:6
suggested [7] 17:7; 18:15; 19:13; 101:13;
 176:23; 262:7; 275:2
suggesting [1] 66:15
suggestion [3] 286:2; 327:17; 331:21
sulfa [1] 90:2
sulpha-trimethoprim [1] 348:6
summarize [8] 13:8; 120:11; 184:20;
 193:16; 208:23; 209:18; 210:11; 235:18
summarized [3] 44:8; 121:1; 250:9
summarizes [1] 207:7
summarizing [2] 147:6; 209:2
summary [8] 55:10; 100:9, 10; 119:24;
 212:14; 215:14; 320:12; 334:20
SUN [2] 7:12; 188:6
Sun [5] 7:13; 188:2, 7; 224:6; 232:2
supernatant [1] 136:2
supplement [1] 175:17
supplemental [1] 44:4
supplied [1] 45:8
supply [1] 182:9
support [18] 55:15; 76:21; 100:16; 102:7;
 122:10; 187:15, 24; 217:23; 219:2;
 271:12; 313:24; 315:10; 320:11; 322:9;
 323:1; 327:8; 329:10; 331:24
supported [4] 103:8; 172:1; 290:14;
 318:18
supportive [1] 334:6
supposed [2] 265:2; 316:17
supposedly [1] 324:1
suppress [1] 246:14
suppression [15] 14:21; 21:3; 107:19;
 172:14; 175:25; 244:6; 245:17, 23, 24;
 246:7; 247:13, 16; 248:2; 250:17; 255:7
suppressive [1] 291:8
suppurative [2] 27:25; 28:1
surface [2] 30:4; 282:14
surgical [1] 28:18
surmise [1] 158:8
surmised [1] 163:22
surprised [2] 166:5; 179:11
surrogate [1] 38:23
surrogates [1] 38:20
surveillance [4] 36:19; 81:13; 162:22;
 220:4
survival [6] 50:3; 53:10; 54:2, 7, 10;
 56:21
susceptibilities [1] 215:9
susceptibility [15] 32:14, 16, 18; 35:1;
 58:24; 86:2; 128:18; 151:8; 214:10;
 219:20; 221:25; 230:3; 231:16; 319:6;
 334:24
susceptibles [2] 230:1, 2
suspect [3] 130:3; 141:8; 338:18
suspected [6] 45:23; 186:15; 216:4;
 310:21; 338:11; 341:11
suspension [3] 43:10, 15; 59:13
switch [1] 16:21

switching [1] 241:12
symptomatic [12] 60:20; 61:18; 62:5;
 63:1; 68:4; 69:2; 70:15; 74:24; 75:19;
 92:1; 132:12; 262:16
symptomatology [2] 96:19, 21
symptoms [13] 27:20; 38:18; 42:7; 64:25;
 66:20; 68:9; 69:4; 75:8; 91:9; 96:17;
 116:15; 124:10; 278:19
sync [1] 18:14
syndrome [1] 287:5
system [5] 64:24; 71:9; 117:23; 146:16;
 285:23
systemic [1] 81:24

- T -

table [5] 112:10; 287:8; 317:4; 330:7;
 337:10
tackle [1] 330:21
tail [1] 155:3
takes [1] 216:22
talk [14] 16:22; 23:20; 27:6; 28:23; 43:6;
 60:11; 62:3; 71:17; 176:20; 194:22;
 226:25; 245:21; 247:12, 13
talked [6] 44:13; 197:15; 204:5; 263:15;
 286:11; 343:10
talking [29] 15:5; 23:8; 25:16; 27:23;
 58:11; 117:12; 147:12; 155:4; 157:9;
 159:5; 162:3; 176:2; 246:4; 248:7; 249:13;
 259:12, 13; 291:16; 304:18; 307:9; 308:4;
 322:20; 337:25; 338:1, 4, 6; 339:6;
 341:15; 349:10
tally [1] 168:2
tapped [8] 40:11; 80:19; 115:7, 8; 132:10,
 22; 133:24; 263:1
tapping [1] 247:4
taps [24] 39:21; 84:18; 114:7; 118:23, 25;
 119:4, 11; 120:7; 122:24; 132:12; 133:13;
 138:9; 142:21; 155:12; 198:7; 208:3, 17;
 209:10; 237:5; 261:9; 275:14, 16; 294:17
target [7] 12:14, 17; 81:8; 288:18; 289:3;
 301:1; 325:17
targeted [1] 301:10
targeting [10] 9:25; 216:18; 217:14;
 258:21; 270:7, 15, 22; 271:1, 25; 297:21
task [2] 11:20; 46:9
tat [1] 163:3
team [5] 43:3; 90:6; 118:14; 188:8;
 218:10
technique [1] 82:11
techniques [4] 24:17; 25:2; 26:4; 140:23
telephone [1] 195:17
telling [4] 161:18; 278:11; 304:8; 319:7
tells [4] 161:2; 165:25; 166:9; 249:8
ten [35] 15:19; 28:21; 33:2; 36:25; 53:6;
 75:21; 108:20; 117:13, 14; 125:20; 132:3;
 140:17; 155:7; 172:8, 9; 185:6; 206:25;
 227:8; 238:22; 240:20; 242:18; 252:24;
 262:11; 283:25; 294:25; 296:8; 301:19;
 307:3; 311:9, 21; 312:11; 328:15; 342:2,
 6, 20
ten-day [4] 195:4; 197:7; 239:19; 240:4
tend [2] 151:19; 269:5
tended [1] 31:14
tends [2] 49:6; 228:1
Tennessee [2] 7:18; 36:18
term [4] 38:7; 76:9, 10; 198:4
termed [1] 40:25
terminology [2] 257:25; 319:5
tested [3] 95:22; 129:7; 268:15
testing [4] 129:4, 13; 268:22; 333:1

tetracycline [1] 33:23
Texas [2] 8:5; 26:3
Thank [29] 6:23; 9:19; 11:3, 10; 15:11; 23:13; 42:17, 18, 24; 60:7; 76:24; 102:22; 112:11; 132:20; 134:14; 150:3; 218:14, 15, 23; 231:21, 22; 253:21; 271:22; 279:7; 281:17; 287:3; 309:3; 350:11, 15
thank [9] 9:21; 10:4; 11:2; 23:14; 54:12; 102:18; 112:3; 350:12, 16
Thanks [10] 121:10; 127:4; 150:8; 168:5; 178:6; 188:6; 194:18; 266:13; 270:1
theoretical [1] 144:17
theoretically [1] 138:11
theory [1] 56:23
therapeutic [4] 17:23; 223:21; 265:13; 347:4
therapies [1] 334:13
Therapy [1] 213:25
thereby [1] 249:22
thereto [1] 150:5
They're [8] 78:5; 109:20, 23; 143:18; 269:17; 302:13; 305:5; 338:1
they're [30] 70:21; 74:13; 107:15, 16; 110:23; 112:9; 129:7; 144:1; 148:23; 149:14; 153:2; 165:16; 172:2; 174:21; 200:20; 233:12; 262:11, 20; 263:13; 283:19; 296:7; 305:4, 6, 7; 314:9; 324:10; 332:24; 337:25; 344:1
They've [3] 109:21, 22; 348:2
they've [3] 92:17; 320:5; 345:11
thigh [5] 49:16; 53:17, 20; 140:7; 223:22
thinking [14] 68:7; 75:12; 224:25; 226:12; 230:15; 245:22; 246:7; 276:15, 16; 277:6, 7, 21; 337:20; 339:17
Third [1] 236:20
third [15] 24:2, 6; 26:11; 33:10; 42:8; 106:19; 108:15; 113:12; 118:10; 119:17; 122:3; 142:21; 177:14; 238:5; 263:21
thirdly [1] 280:16
thirds [3] 26:9, 14; 285:8
Thirty-seven [2] 95:22; 101:8
Thornsberry [1] 32:11
thoughts [1] 41:10
Three [2] 114:6; 162:16
three-to-one [1] 73:13
three-week [4] 280:7; 281:5; 293:15, 20
threshold [4] 30:3; 161:14; 298:21; 307:6
threw [1] 236:16
throw [2] 284:20; 332:10
thrown [1] 323:12
tight [3] 69:8; 159:9; 275:7
tightened [1] 19:22
till [1] 193:25
timed [1] 285:11
times [16] 12:7; 14:1; 19:15; 72:25; 73:10; 129:4, 7; 136:11; 141:1; 157:19; 177:12; 200:16; 207:20; 244:3; 245:17; 262:7
Timing [1] 14:10
timing [14] 20:20; 22:13, 24; 61:17; 66:19; 69:12; 75:18; 199:1, 12; 216:9; 217:10; 270:4; 279:11; 306:10
tissue [2] 28:25; 51:8
tissues [2] 46:19; 140:23
title [1] 23:16
titled [2] 79:20; 213:24
TM [4] 20:3; 235:22; 236:11; 237:1
TMIC [7] 189:10; 190:11; 192:17; 193:1; 194:1, 4, 13
TMICs [2] 189:24; 194:11
TMP [1] 90:2

TMP-sulfa [2] 158:5, 11
TMs [2] 235:24; 237:7
TNF [1] 142:14
Tolerance [1] 248:6
tolerance [4] 87:16; 245:19; 248:7; 249:18
tolerant [1] 245:25
tolerated [1] 111:16
Tom [4] 4:9, 10; 8:15; 281:24
Tomasz [1] 176:21
topics [1] 46:2
tops [1] 274:10
Total [2] 114:2; 189:12
total [17] 113:11; 114:3, 17; 120:13; 131:24; 132:1; 145:1; 166:18, 25; 167:23; 168:21; 179:13; 188:10, 21; 241:18; 328:13; 342:3
totally [5] 126:7; 246:3; 249:19; 267:24; 337:5
touch [2] 77:16; 249:24
touched [2] 78:11; 81:20
tough [2] 106:7; 303:24
touted [1] 248:11
toxicologic [1] 46:23
track [1] 111:2
tract [13] 78:6; 102:14; 146:11, 15, 22; 225:3; 248:24; 261:12, 13, 15, 20; 262:16
traditional [2] 21:13; 83:14
traditionally [1] 75:25
transcripts [1] 246:9
transformed [1] 178:9
transition [1] 28:11
translate [1] 267:17
translated [2] 50:2; 312:24
translates [1] 335:18
transmission [1] 36:12
treat [23] 12:2; 83:10, 11; 84:3; 85:21; 99:19; 148:16; 149:10, 13; 153:23; 174:16; 187:3, 4, 7; 197:7; 225:20; 249:21; 256:18; 324:5, 13; 336:12, 16; 346:21
treatable [2] 222:19; 223:7
treated [16] 85:23; 86:6; 94:23; 145:17, 19; 159:14; 172:24; 192:16; 193:1; 225:7, 8, 16; 226:2; 239:12; 262:15; 266:16
treating [6] 50:17; 102:20; 213:13; 225:25; 267:25; 298:23
treatment [47] 5:8; 39:22; 40:11; 41:12; 44:5; 45:17; 68:8; 78:13, 23; 79:1, 22; 92:8; 101:23; 104:1; 110:19; 111:19; 125:21; 139:18, 21; 145:22, 24; 177:9; 180:12; 184:8; 185:19; 186:10, 18; 196:11; 217:24; 218:2, 5; 238:19; 271:13; 296:8, 9, 12; 297:2; 299:23; 303:14; 313:25; 315:23; 322:10; 329:11; 331:10; 336:22; 340:12
treatments [1] 78:15
treats [2] 50:4; 216:5
tremendous [2] 10:9; 63:18
tremendously [1] 154:23
trend [4] 36:9; 49:6; 104:17; 191:14
trending [1] 93:11
trends [1] 31:14
triangles [1] 56:10
triaxone [1] 240:20
tricky [2] 90:4; 132:23
trimethoprim-sulfa [6] 33:23; 240:20; 241:1, 3, 4, 5
trimethoprim-sulpha [1] 239:25
trimethoprim-sulphamethox [2] 239:20;

240:4
triple [1] 175:15
trouble [4] 146:7; 149:6; 317:11; 342:8
troubled [1] 126:13
troublesome [1] 345:10
trovafloxacin [1] 105:11
true [11] 23:16; 34:11; 50:20; 53:1; 73:3; 138:11; 147:11; 161:14; 235:9, 10; 324:14
truly [5] 148:1; 159:13; 281:6; 330:25; 331:18
truth [2] 149:1, 4
tubal [1] 27:3
tube [7] 26:25; 27:8; 30:1; 266:24; 269:3, 4; 282:15
tubes [4] 28:17, 22; 262:9, 11
turns [1] 66:22
Twenty [1] 25:20
twice [7] 43:11, 18; 58:5; 75:8; 79:8; 173:16; 200:15
two-plus [1] 32:1
twofold [2] 25:24; 350:1
twos [5] 169:19, 24; 317:16; 326:23; 335:3
tympanic [6] 16:7; 19:23, 25; 21:20; 132:9; 236:20
tympanocenteses [2] 113:10; 136:21
Tympanocentesis [3] 16:10; 17:22; 18:25
tympanocentesis [50] 12:21; 14:16, 19; 15:1; 17:10, 17; 20:6, 11, 25; 22:16; 44:15; 45:2; 64:5, 9; 65:25; 72:2, 3; 80:15, 17, 21, 23; 82:10, 17, 22; 83:19, 23; 85:22; 96:7; 99:21; 113:5, 12, 22; 115:11; 118:8; 122:3, 4; 124:10; 138:25; 195:11; 196:18; 197:11; 217:7; 234:3, 25; 240:19; 270:16; 275:6, 12; 278:14; 338:14
tympanometric [1] 90:7
tympanometry [1] 70:23
tympanostomy [1] 28:17
Type [3] 36:17, 21; 107:24
type [13] 15:5; 48:6; 57:25; 175:1; 204:9; 258:6, 20; 294:21; 305:1; 315:6, 7; 321:1; 339:5
typed [2] 115:21, 22
types [7] 35:15, 20, 23; 187:14; 195:10; 288:17
typical [1] 83:17
Typically [2] 81:25; 313:10
typically [9] 21:18; 22:1; 60:25; 61:21; 127:8; 216:20; 254:8, 11; 275:13
typo [1] 168:11

- U -

U.S. [2] 197:4; 220:10
unacceptable [2] 258:2, 17
unanimous [1] 348:11
unanimously [1] 348:16
unbound [2] 51:19; 131:25
uncertainty [1] 350:6
uncomfortable [6] 323:14; 325:10; 331:19; 332:3; 335:10; 340:24
uncommonly [1] 27:24
uncomplicated [1] 305:18
uncontrolled [1] 17:16
undefined [1] 72:14
underestimated [1] 138:18
underestimating [1] 250:4
undergo [2] 28:13; 295:16
underlying [5] 42:15; 239:18; 240:9; 264:17; 343:17

underpin [1] 19:18
underpinned [2] 313:8, 15
underpinning [3] 17:3; 278:10; 279:5
underscore [1] 315:19
understand [19] 114:14; 115:12; 128:10;
 73:23; 175:21; 176:14; 181:22; 249:1;
 258:23; 259:16; 262:14; 273:19; 285:9;
 289:4; 313:14; 314:23; 318:22; 320:4;
 345:17
understanding [4] 38:22; 154:21; 244:21;
 245:2
understood [4] 175:19; 274:22; 276:7;
 331:8
undertaken [1] 82:14
underwent [1] 83:19
undetectable [1] 135:16
unexpectedly [2] 202:7; 209:9
Unfortunately [1] 172:24
unfortunately [1] 144:23
unilateral [1] 124:19
unit [1] 128:4
United [9] 28:19; 32:3, 13; 78:18; 80:5;
 101:22; 311:21; 348:19; 349:15
University [16] 5:6; 7:16, 18, 21, 24; 8:3,
 5, 8, 11, 14, 23; 9:2, 6, 15, 17; 46:5
unlikely [3] 39:7; 138:15; 182:5
unreliable [2] 191:19
unselected [2] 280:18; 297:24
untreatable [1] 304:3
untreated [2] 87:1; 225:6
unusual [2] 254:22; 341:8
updated [1] 40:14
upper [9] 157:18; 239:8; 261:15, 20;
 262:15; 327:2; 332:2; 333:10; 342:1
upwards [2] 29:11; 32:4
urge [1] 76:19
urinary [7] 146:11, 15, 22; 248:24;
 261:12, 13, 20
urine [1] 261:15
URIs [1] 36:4
USC [2] 4:24; 5:16
useful [7] 154:23; 251:7; 308:7; 344:19,
 20; 346:1; 348:8
uses [3] 45:1; 51:19; 226:20
usual [2] 136:17; 342:25
ut [1] 126:14
UTI [1] 262:16
utility [1] 142:20
utilized [1] 79:4

- V -

vaccine [5] 35:16, 23, 24; 311:16, 19
vaccines [1] 31:18
vaguely [1] 68:13
valid [3] 75:15; 76:23; 126:14
validate [1] 82:20
validated [9] 61:1, 4; 63:2; 64:22; 65:8;
 75:4, 8, 16; 278:18
validates [1] 251:16
validating [1] 65:6
validation [1] 328:3
validity [1] 76:15
valuable [2] 293:17; 296:17
value [7] 45:21; 186:14; 189:24; 194:3;
 247:13; 308:1; 315:2
values [8] 130:14; 173:1; 192:14, 20;
 3:5; 221:22; 242:8; 304:22
vancomycin [2] 33:22; 301:19
variabilities [2] 191:21; 193:7
variability [12] 130:11, 19; 133:11; 136:5;

161:21; 191:24; 192:5, 25; 193:3; 224:7,
 18; 349:25
variance [1] 137:20
variation [1] 51:9
varies [2] 52:20; 311:7
variety [7] 47:12; 49:24; 50:7; 52:5; 55:1;
 57:24; 140:23
vary [6] 51:2, 6, 12, 22; 145:2; 254:10
varying [1] 52:6
vast [5] 27:4; 33:19; 35:14; 278:24;
 344:12
vastly [1] 138:15
VAZQUEZ [1] 9:16
Vazquez [1] 9:16
VBNCs [1] 248:11
vectors [1] 68:14
verified [2] 79:17; 105:14
verify [1] 106:12
versed [1] 106:1
vertical [1] 64:10
Veterans [1] 46:4
viable [4] 142:18; 225:10; 248:11; 251:13
view [5] 68:7; 71:15; 126:20; 228:21;
 273:2
viewed [1] 44:15
vigorous [1] 350:12
viral [16] 26:7, 11, 12, 24; 36:11; 41:20;
 42:4; 66:7, 12, 13, 15; 68:19; 106:6, 8;
 109:23; 302:12
Virgil [2] 86:15; 240:18
Virginia [2] 7:16
virtually [2] 59:15; 143:23
virtue [2] 31:7; 37:11
virulence [5] 177:21; 178:14; 179:25;
 180:5; 301:5
virulent [4] 177:17; 180:5, 8; 302:4
virus [1] 26:15
viruses [5] 26:5, 18; 27:5; 66:11; 278:1
vis-a-vis [1] 106:14
visits [6] 195:13, 15, 18; 197:23; 198:4;
 214:14
visually [1] 151:16
vitro [7] 219:11; 220:1; 226:13; 230:3;
 231:2; 267:16; 300:6
vivo [5] 46:10; 79:14; 85:22; 102:6;
 267:15
Volume [1] 129:16
vomiting [1] 211:19
vote [29] 269:19, 21; 271:18; 280:24;
 282:7, 19, 21; 297:20; 314:5, 16; 317:19,
 21; 319:16, 17; 324:19, 24, 25; 327:3, 5,
 17, 19; 329:9; 331:8; 332:9; 334:1, 9;
 337:13; 348:13, 14
voted [2] 340:22; 346:16
votes [2] 260:14; 322:6
voting [14] 5:25; 265:19; 271:24; 272:2;
 281:18, 20; 282:4, 22; 318:23; 319:1, 12;
 323:14; 330:15; 345:4
VRE [2] 298:21, 23

- W -

wag [1] 155:4
wait [4] 182:11; 259:18, 22, 23
waiver [2] 4:25; 5:1
WALD [9] 8:19; 179:25; 235:12; 248:21;
 282:8; 305:16; 310:15, 19; 312:1
Wald [20] 5:6, 10, 20, 23; 8:19; 36:2;
 105:25; 179:24; 181:20; 235:11; 247:23;
 248:20; 261:11; 282:4, 6; 284:14; 285:20;
 306:18; 310:12; 341:18

walk [4] 150:21; 204:24; 219:25; 220:9
wall [3] 31:8; 141:25; 142:1
wanted [23] 10:7; 18:5; 49:23; 92:8;
 116:19; 131:10; 135:4; 175:8; 192:19;
 205:19, 22; 209:18; 212:23; 245:16;
 253:22; 254:25; 257:10; 260:16; 282:6, 8;
 314:6; 349:8; 350:16
wanting [2] 275:3; 309:5
wants [5] 109:19; 129:11; 160:14; 314:11;
 345:1
washed [1] 71:1
Washington [1] 24:16
washout [1] 82:1
watery [2] 212:5, 6
Wayne [1] 9:17
ways [4] 129:9; 156:14; 308:14, 22
we'd [7] 79:14; 165:11; 188:1; 257:23;
 271:17; 340:9; 345:7
We'll [9] 4:8; 77:16, 24; 78:2; 112:5;
 150:9; 169:25; 184:3; 269:10
we'll [31] 6:25; 15:10; 27:5; 32:23; 77:8,
 17, 19; 78:7; 95:18; 118:15; 124:22;
 148:1; 150:4; 182:20, 25; 184:17; 187:17;
 216:13; 269:8, 20; 271:11, 16; 283:24;
 292:25; 295:3; 303:25; 312:16; 314:4, 5;
 317:5; 324:24
We're [7] 69:9; 147:12; 152:24; 258:3, 18;
 277:10; 321:17
We've [6] 88:14; 165:6; 169:14; 182:14;
 346:14; 350:10
we've [33] 15:13; 21:10; 42:5; 44:13;
 45:15; 86:16; 90:17; 92:6; 138:12; 144:23;
 152:1; 171:1; 195:9; 197:15; 198:24, 25;
 204:1, 5, 13; 205:19; 210:12; 263:15;
 266:21; 285:13; 286:1; 293:9; 313:10;
 320:10; 330:18; 334:12; 343:9; 344:17;
 348:13
wedge [1] 24:19
week [9] 34:25; 74:18; 160:17; 238:25;
 239:1, 9, 23; 240:2; 279:23
weeks [25] 16:19; 19:5; 20:14; 22:21;
 70:25; 85:9; 92:8; 106:4; 216:22; 240:24,
 25; 241:1, 15, 16, 18; 242:14; 243:24;
 245:4; 261:15; 262:16; 270:9; 282:13;
 286:4; 289:8
weigh [1] 186:24
weight [1] 18:1
Welcome [1] 184:3
welcome [3] 4:4; 7:2; 345:2
weren't [5] 124:4; 130:5; 168:6, 8; 169:5
West [1] 7:22
wheedled [1] 325:1
whenever [1] 17:24
Whereas [2] 106:10; 199:4
whereas [6] 130:5; 146:18; 199:24;
 206:25; 304:1; 317:9
Whereupon [4] 112:12; 183:5; 269:12;
 350:19
whichever [1] 156:19
white [4] 42:12; 141:5, 9; 200:9
Whitney [2] 34:25; 35:19
whoever [1] 238:11
wide [1] 174:22
widespread [2] 267:5, 6
william [1] 46:3
window [25] 88:21; 89:4; 91:23; 94:2, 7,
 23; 95:2, 9, 12, 13; 96:11; 98:24; 99:2;
 100:4, 7; 101:5; 113:13; 114:5; 115:8;
 117:13; 122:5, 12; 127:23; 251:21; 295:9
winter [1] 109:23
Wisconsin [2] 8:23; 46:6