SUMMARY MINUTES

CENTER FOR DEVICES AND RADIOLOGICAL HEALTH

MEDICAL DEVICES ADVISORY COMMITTEE

GENERAL AND PLASTIC SURGERY DEVICES PANEL

July 29, 2022

9:00 a.m. EST

Webcast via Microsoft Teams

Attendees:

Chairperson

Hobart W. Harris, M.D., M.P.H.
Professor of Surgery
Division of General Surgery, UCSF — San Francisco, CA

Voting Members

Karla V. Ballman, Ph.D.
Division Chief of Biostatistics & Epidemiology
Cornell Medicine — New York, NY

Mary H. McGrath, M.D., M.P.H.
Professor of Surgery
Division Plastic Surgery, UCSF — San Francisco, CA

Murad Alam, M.D.
Vice Chair, Department of Dermatology
Northwestern University School of Medicine — Chicago, IL

Temporary Non-Voting Members

Karen E. Burke, M.D., Ph.D.
Private Practitioner of Dermatology — New York, NY

Paula Bourelly, M.D.
Dermatologist at Olney Dermatology Associates — Olney, MD

Maral Skelsey, M.D.
Director of Dermatologic Surgery Center of Washington — Chevy Chase, MD

Paul Pisarik, M.D.
Practitioner of Family Medicine — Tulsa, OK

Maria Suarez-Almazor, M.D.
Professor, Department of Health Services Research
UT MD Anderson Cancer Center — Houston, TX

Neil Farber, M.D.
Professor Emeritus of Clinical Medicine
Division of General Internal Medicine — University of California, San Diego

Renata Block, PA-C
Physician's Assistant in Advanced Dermatology & Aesthetic Medicine — Chicago, IL

Laura P. Bush, DMSc., PA-C, DFAAPA

Dermatological Physician's Assistant, Fayette Area Dermatology — Fayetteville, GA

Lisa Gualtieri, Ph.D., ScM.
Professor, Department of Public Health and Community Medicine
Tufts University School of Medicine — Boston, MA

Steven J. Skates, Ph.D.
Associate Professor of Medicine and Biostatistics
Massachusetts General Hospital Clinical School — Boston, MA

Katalin Roth, M.D., J.D.
George Washington University — Washington, D.C.
Professor of Medicine; Geriatrics' Palliative Medicine Specialist

Veronica Rotemberg, M.D., Ph.D.
Memorial Sloan Kettering Cancer Center — New York, NY

Industry Representative

P. LaMont Bryant, Ph.D.
Vice Present of Regulatory Affairs
Ethicon, Inc.; Johnson & Johnson

Patient Representative

Deneen Hesser, MSHSA, RN

Food and Drug Administration

Long H. Chen, M.D. — CDRH/OPEQ/OHTIV
Acting Director for the Division of General Surgery Devices
Office of Surgical and Infection Devices

Binita Ashar, M.D. — CDRH/ODE
Director of Office of Surgery and Infection Control Devices
Center for Devices and Radiological Health

Candace Nalls, Designated Federal Officer

CALL TO ORDER

Panel Chairperson Dr. Hobart W. Harris called the meeting to order at 9:00 a.m. He noted the presence of a quorum and stated that present members have received training in FDA device law and regulations. **Chairperson Harris** reminded the public and panelists that this is a nonvoting meeting. He stated the day's agenda:

1. discuss the risks and benefits of skin lesion analyzers (SLAs) for external use
2. recommend the FDA whether SLAs should be down-classified from class III to class II, subject to general and special controls
3. discuss the types of evidence, including clinical evidence that would be helpful to support certain indications
4. discuss appropriate special controls necessary to mitigate the risk to health and assure the safety and effectiveness of these devices

He then asked members of the Committee and the FDA Staff to introduce themselves.

CONFLICT OF INTEREST STATEMENT
TEMPORARY-NONVOTING MEMBER STATUS STATEMENT
GENERAL ANNOUNCEMENTS

Candace Nalls, Designated Federal Officer, reported that no conflict of interest waivers were issued. She announced that Dr. Bryant would serve as the Industry Representative and that Neil Farber, Paul Pisarik, Katalin Roth, and Maria Suarez-Almazor would serve as a temporary non-voting members. She introduced Audra Harrison as the meeting's press contact.

FDA SUMMATION OF PRIOR DAY'S PROCEEDINGS

Dr. Jianting Wang gave an overview of the Panel discussions and FDA questions from July 28, 2022:

1. In the morning, FDA had presented:
   i. an overview of skin lesions
   ii. current diagnostic approaches and treatments of skin cancer
   iii. the lesion device landscape
   iv. diagnostic accuracy of skin malignancies by healthcare providers
   v. options for ground truth considerations
   vi. benefits and risks of SLAs with considerations of prevalence and different populations

2. Outside speakers Dr. Cohen and Dr. Adamson spoke on challenges and possible solutions with artificial intelligence (AI) and machine-learning (ML) algorithms for skin cancers, especially pertaining to potential bias and disparity for different ethnic groups.

3. In the Open Public Hearing Session, suggestions regarding risks, performance evaluations, and adequate regulations of these devices were made by
   i. Practicing dermatologists

ii. Nevisense user Dr. William Steffe
iii. Mr. Simon Grant, the CEO of SciBase for Nevisense, regarding the use and patient risks of skin lesion analyzers, key considerations in performance evaluation of skin lesion analyzers, and the importance of adequate regulations of these devices.

4. On FDA's question on ground truth, Panel believes histological diagnosis is required, while some believe alternative approaches can be valuable depending on scenario.

5. On FDA's question on performance thresholds, Panel favored a threshold that shows the device improves the performance of the clinical user or improvements in patient benefits. The sensitivity and specificity threshold should be higher for standalone devices compared to devices for adjunct use.

6. In afternoon discussions, the Panel deliberated on the
   i. need for other evaluation endpoints
   ii. binary sensitivity and specificity metric
   iii. importance of prospective data from real-world use
   iv. need for post-market studies or surveillance
   v. impacts of false negatives and false positives, especially for laypersons

7. On FDA's question on performance in U.S. populations, Panel agreed that all skin types should be studied, but exceptions can be made. Measures should be implemented to promote continuing data collection in low-incidence populations.

Dr. Wang noted that the docket for public comments on these topics remains open until August 29th, 2022.

FDA PRESENTATIONS

Dr. Ryan Ortega presented an overview of FDA device classification and detailed classification criteria for Classes I, II, and III.

For Class I: general controls (basic requirements that apply to all medical devices, outlined in the Federal Food, Drug, and Cosmetic Act) are sufficient to provide reasonable assurance of the safety and effectiveness of the device.

For Class II: general controls by themselves are insufficient to provide reasonable assurance of safety and effectiveness for the device, and there's sufficient information to establish controls that provide such assurance.

For Class III: insufficient information exists to determine that general and special controls are sufficient to provide reasonable assurance of safety and effectiveness and the devices are life-sustaining or life-supporting. Or: they are of substantial importance of preventing impairment of human health. Or: they present an unreasonable risk of potential illness or injury

Dr. Ortega elaborated on FDA's decision-making process and announced FDA's intent to incorporate Panel and public feedback into their current deliberations.

Dr. Colin Kejing Chen detailed the pivotal studies and data that led to the approval of two computer-aided adjunctive devices for assessing lesions specific for melanoma: MelaFind and Nevisense. The devices are exclusively approved to supplement dermatologists' other clinical evaluations in deciding whether to biopsy a skin lesion for melanoma. In radiology and gastroenterology, AI/ML-based diagnostic devices, subject to special controls, are categorized as Class II. Finally, **Dr. Chen** pointed out that in other countries where such devices are approved, the regulatory process does not include the review of clinical data.

Dr. Chen stated that these computer-aided adjunctive devices were called to be considered for re-classification into Class II from Class III.

Dr. Henry Lee discussed post-market safety and effectiveness. He cited results from the pivotal MelaFind study, a review by Winkelmann et al. covering seven other MelaFind-related studies, and results from FDA databases. Collectively, data trend towards increased accuracy and sensitivity resulting from MelaFind usage by providers, and no significant adverse events have been formally reported from MelaFind/Nevisense usage.

Dr. Lee supported the re-classification of the devices to Class II on these premises.

Neil Ogden briefly recapped the contributions of the previous presenters. He announced the identification of appropriate special controls to assess performance and facilitate the re-classification of the devices to Class II proposed by the FDA. He noted that FDA necessitated premarket notification for the devices to ensure safety and effectiveness.

Dr. Scott Kominsky proposed specific re-classification and regulatory controls that might permit the transition the devices to Class II. FDA assessed risks associated with computer-aided device use and proposed mitigation measures to ensure safety and effectiveness in this Class II in conjunction with established general controls.

1. Risk: false-negative or false-positive results

   Proposed mitigation measures:

   i. Clinical performance testing to demonstrate the device aids detection/diagnosis of lesions suspicious for melanoma.
      a. Test if output meets performance thresholds, such as sensitivity and specificity
      b. Perform side-by-side comparisons
      c. Perform reader studies to determine whether a device improves the performance of providers

   ii. Non-clinical performance testing to show the device works as intended, including assessment of thermal, electrical, mechanical, and light-related hazards.

2. Risk: Improper use of device

   Proposed mitigation measures:

i. Require device labeling include
    a. the intended patient population, such as gender and Fitzpatrick skin type
    b. the intended anatomical sites and types of lesions to be assessed
    c. compatible imaging hardware
    d. compatible hardware for the device
    e. situations in which the device is likely to fail or not operate at its expected performance level
ii. Human factors assessments that examine the ability of attempted users to properly operate the device following training

3. Risk: Device failure/malfunction

Proposed mitigation measures:

i. Non-clinical performance testing to demonstrate that the device performs as intended under the anticipated conditions of use, including testing of safety features intended to mitigate device-specific hazards.
ii. Software verification, validation, and hazard analysis.
iii. Testing to demonstrate electrical, mechanical, and thermal safety.
iv. Device labeling that includes instructions on appropriate usage and maintenance of the device.
v. Device labeling that warns users about use on lesions close to the eye and unsafe exposure to the eyes.

4. Risk: Radiofrequency and/or electromagnetic disturbances produced by the device

Proposed mitigation measures:

i. Testing to demonstrate electromagnetic compatibility with other medical devices

5. Risk: Adverse tissue reaction

Proposed mitigation measures:

i. The risk of adverse tissue reaction for patient contacting devices can be mitigated by special controls that require demonstrate elements of the device which may contact the patient can be demonstrated as compatible and cause no unacceptable biological responses.
ii. Labeling requirements which include
    a. user qualifications needed for safe use of the device,
    b. instructions for maintenance
    c. instructions for reprocessing of any re-usable device components

6. Risk: of infection and cross-contamination from multiple uses

Proposed mitigation measures:

i. validation of stabilization

ii. shelf-life testing
iii. labeling that includes validating methods
iv. instructions for reprocessing patient-contacting components

QUESTIONS FROM THE PANEL

Ms. Block began by asking FDA if they are taking non-melanoma skin cancers and the rapid progression of technology into account. **Neil Ogden** stated affirmed the FDA's awareness of these issues and informed that the meeting is specifically over devices intended for melanoma.

Dr. Skelsey inquired if the re-classification extends to future devices of similar purpose. She relayed her experience with MelaFind and announced it was not functional in a dermatology office due to a high number of false positives. She noted specificity data from MelaFind is 10 years old and requested more current data. She added that labeling may be insufficient to mitigate the risk of patient misunderstanding of device output.

In response, **Dr. Ashar** reminded the Panel that the meeting is about risks and mitigations that the Panel would recommend to FDA. **Dr. Lee** commented that MelaFind is not marketed anymore and there is no additional recent data.

Dr. Farber requested clarification on whether future devices of the same type would automatically be Class II when released. He further inquired whether the FDA is considering approval for other healthcare practitioners and/or laypeople and how FDA would assess safety in those populations. **Dr. Ashar** reiterated the scope of the discussion.

Dr. Rotemberg stated that in reader studies presented thus far, dermatologist performance was not increased; therefore, she inquired why a reader study would be a sufficient special control. **Dr. Ashar** reiterated the scope of the discussion: whether MelaFind and Nevisense should be Class II or III, the scientific issues, and the risk mitigations.

Dr. Alam expressed confusion about why this discussion of re-classification is occurring now; in his opinion, the proceedings are premature given the limited available information in AI/ML regulatory arenas in general.

Dr. Chen asserted that FDA has presented sufficient scientific information to support the re-classification in a least burdensome manner. **Dr. Ashar** cited a continuous, self-imposed burden to do right by patients by ensuring devices are appropriately regulated/classified.

Dr. Roth wondered if this process of down-classification is standard procedure at FDA. **Neil Ogden** replied that it is common to ensure high-quality devices make it to market; **Dr. Ashar** confirmed.

Dr. Bourelly recommended including protective measures on labels so a provider can ensure a device works correctly after a certain number of uses.

Dr. Skates voiced concern that down-classification could open doors to use by non-dermatologists because of its category. He inquired towards the extent of the additional burden

posed by retaining Class III. **Dr. Ashar** responded the FDA does not find extension of use to other users appropriate and that the rest of his concerns will be addressed in the open hearing.

Dr. McGrath wondered if FDA considered the impact of PMA requirements for Class II devices on future generations. **Dr. Ortega** clarified that in Class II, 510K processes are utilized, and PMAs, premarket applications, are required only in Class III.

Ms. Hesser observed that the Nevisense is opposed to down-classification and wondered what weight the FDA had given the company's input. **Neil Ogden** reiterated the scope of the discussion. **Dr. Ashar** assured that FDA gives weight to all input and seeks perspectives from all affected groups in order to identify missing pieces in regulatory items.

Dr. Skelsey wondered how FDA will conduct future studies when MelaFind is not on the market currently and what studies FDA would suggest to collect more data; she also requested clarification on why the off-market MelaFind was relevant. **Dr. Ashar** requested **Dr. Skelsey**'s thoughts on how the FDA might design that special control. **Dr. Ashar** also clarified that MelaFind is necessary to discuss because it is still on the record as Class III.

Dr. Roth expressed a discomfort with the level of information provided in the example patient education pamphlet provided to the Panel.

Dr. Roth strongly suggested including more robust information in patient materials to mitigate risk.

Ms. Bush inquired if device compatibility would be assessed regardless of how close the lesion is to the implant. Ms. Bush noted she would be uncomfortable using the device on anyone with a defibrillator.

Ms. Bush suggested routine verification of software as a special control.

Dr. Alam expressed that in a rapidly-changing technological landscape, given lack of understanding of the devices in general, there's no guarantee that generic devices will function in the same way, even if they have the same design.

Dr. Alam determined that the technology cannot be subject to special controls.

Dr. Rotemberg mentioned that there is some understanding of AI, such as data drift and changes in performance over time but noted a lack of transparency around algorithmic data.

Dr. Rotemberg seconded routine updates of software as a special control.

Dr. Skates requested more information on the distinction between a 510K and a PMA, which **Dr. Asher** and **Ryan Ortega** provided. Dr. Skates voiced concern that 510K parameters may permit neglect of prospective studies.

Dr. Skates emphatically recommended that special controls include a requirement for a prospective study comparing dermatologists' performance with and without the device.

OPEN PUBLIC HEARING

Dr. Nalls, Designated Federal Officer, read the Open Public Hearing Disclosure Process Statement. **Dr. Harris** announced the receipt for three formal requests to speak.

Simon Grant, CEO of Nevisense developer SciBase, presented three major concerns:

1. Down-classification, which results in standardized validation and study designs, allows for limited FDA involvement. However, FDA input in these complex studies is necessary to ensure comprehensive safety measures are put in place.

2. Different technologies have different strengths/weaknesses and require customized study designs and controls. Standardized study design is insufficient.

3. FDA has less control over Class II devices, which is particularly problematic with AI systems, where small changes result in large, unpredictable effects.

Mr. Grant also commented that the FDA's justifying literature search is incomplete and does not acceptably inform reclassification. He further noted that it is unusual for FDA to consider reclassification of newer devices with very few existent models.

Mr. Grant and SciBase support extensive FDA involvement in regulating devices for the detection of melanoma, a high-risk disease. **Mr. Grant** unequivocally supported retaining Class III designation.

Next, **James Castro Argueta**, a medical student, spoke on behalf of the National Center for Health Research. He declared no conflicts of interest due to his involvement with the nonprofit research center.

Mr. Argueta and his organization do not support the reclassification of MelaFind and Nevisense from Class III to Class II. **Mr. Argueta** relayed two concerns:

1. There's no guarantee that newly-developed devices cleared through the 510K devices would be accurate as those currently on the market. For that reason, newly-developed devices should be reviewed through the PMA process.

2. There is a clear risk of false-positive and false-negative results, misuse, and device failure, and the FDA has not provided evidence that these risks can be adequately mitigated with Class II general and special controls listed in the executive summary.

Mr. Argueta expressed disappointment with lack of patient diversity in the evidentiary studies and lack of clarity and detail in the FDA's proposed mitigations.

On behalf of the National Center for Health Research, **Mr. Argueta** rejected the proposed reclassification.

The third speaker, **Dr. Lily Peng**, representing Google, presented on the consumer benefits of skin lesion diagnostic devices at large. The arranged presentation on search results was outside the scope of the meeting, but nevertheless provided insight into consumer

preferences for diagnostic devices to serve as an intermediary between doing nothing and going to the doctor.

Dr. Harris pronounced the Open Public Hearing officially closed, and the Panel broke for lunch.

GENERAL CLARIFICATIONS

Before resuming with FDA questions, **Dr. Ortega** gave an overview of differences between Class II and III devices with emphasis on 510K vs. PMA submissions. **Dr. Ashar** requested the Panel provide advice on the specific scientific evidence they would like to see assessed in contemplation of reclassification. **Dr. Harris** requested that **Mr. Bryant** provide his industry perspective on how reclassification may affect a company and their competitors' decisions to develop devices. **Mr. Bryant** responded that companies look at product, procedure, level of risk, and investment in time; FDA classification is not a direct factor; however, companies air toward the 510K process if there is the potential for claiming substantial equivalence.

Dr. Rotemberg, as an AI researcher with expertise in melanoma detection, gave a brief overview of the latest research in AI performance and influencing factors. She highlighted: how minor details like interface impact provider interpretation, investigations about ethics and data transparency, algorithm performance degrading over time, and recently-published guidelines for evaluation of AI tech.

Dr. Farber added that the Hawthorne Effect prevents large sets of data from applying to other AI devices due to the nature of being observed.

Dr. Alam asked Dr. Rotemberg if she has concerns about AI evading quality legislation for profit, and if she finds the proposed special controls sufficient to ensure continued motivation for the improvement of the devices.

Dr. Rotemberg weighed in: research should focus less on reader studies; algorithm-related data cannot be compared to each other to establish equivalent performance; and the current proposal falls short in the areas of clinical validation and post-market surveillance. She further recommended updates based on performance evaluations, which need to be different for each device.

PANEL DISCUSSION OF FDA QUESTIONS

Question 1

Jianting Wang read the first question. FDA identified these risks:

- False-negative or false-positive results
- User error/improper device use
- Device failure/malfunction
- Electrical, thermal, mechanical, or light related injury
- Interference with other devices

- Adverse tissue interaction

The Panel was asked to comment on whether this list completely and accurately identifies the risks to health presented by computer-aided devices which provide adjunctive diagnostic information to dermatologists in assessing lesions suspicious for melanoma.

The Panel was also asked to comment on whether they disagree with inclusion of any of these risks or believe that any other risks should be included in overall risk assessment.

Dr. Burke found it to be a complete list of concerns and emphasized disclaimers about use with other metal/electrical implantable devices.

Dr. Alam was skeptical about the value of registries and post-marketing surveillance and proposed prospective trials as a better alternative.

Dr. Farber vouched for the inclusion of psychological impacts of false-negative and false-positive results; he also supported prospective studies for real-world data for more complete and accurate data.

Dr. Rotemberg contributed that there is a risk of algorithm bias/validation concerns.

Dr. Skelsey stated there is insufficient data for certain populations and that the exclusion of this information is not sufficient.

Dr. Skates emphasized the importance of risk-benefit ratios in determining sensitivity. He presented suggestions on the technicalities of calculating these ratios and reiterated the importance of prospective studies to obtain data upon which to base the ratio calculations.

Dr. Bourelly called upon the FDA to consider provider performance as a special control, on top of device performance. She suggested mandatory trainings/tests with tight controls on who can administer training materials. She further suggested maintenance certifications.

Dr. Roth offered that the end user, the patient, is neglected in discussion of risks, such as patient harm by biopsy.

Dr. Harris provided a summary of the Panel's contributions and noted that principle concern was over the myriad of health risks of false-negatives and false-positive results. Additionally, the Panel included:

- a need for robust data sets
- a need for prospective randomized control trials to represent real-world experiences
- a need to address psychological effects of information delivered by these devices
- a need to address the risk of bias incorporated within an algorithm
- a need for algorithms to be updated
- a need for practitioners to be properly trained
- a need for continued training as the technology evolves

Question 2 (4 Parts)

Part 1

FDA asked if the Panel members agree or disagree that general controls alone are not sufficient to provide a reasonable assurance of safety and effectiveness for these computer-aided devices, and to elaborate if in disagreement.

Dr. Farber stated agreement. No alternate opinions were voiced from the Panel.

Part 2

FDA asked the Panel if they agree that the devices are not life-supporting or life-sustaining or are of substantial importance in preventing impairment of human health, and to elaborate if in disagreement.

Dr. Alam disagreed; the devices facilitate early detection to prevent detrimental outcomes.

Dr. Skelsey disagreed; the devices are intended to prevent impairment to human health.

Dr. Farber disagreed on the same basis as Dr. Alam and Dr. Skelsey.

Dr. Roth agreed with the FDA and found melanoma detection not time-sensitive enough to be considered life-threatening.

Dr. Suarez-Almazor stated she does not see the benefits of reclassification and thus deemed the risk-benefit ratio to favor Class III categorization.

Dr. Rotemberg underscored the difficulty of answering the question; she detected significant disparity between the Panel's high standards and the Class II with special controls descriptors and.

Dr. Ballman agreed with the FDA, since dermatologists could override the device's output in their decision-making.

Dr. Alam disagreed.

Ms. Bush agreed.

Part 3

FDA does not believe the devices provide a reasonable risk for illness or injury. Does the Panel agree or disagree?

Dr. McGrath disagreed; if a provider reads the output incorrectly, there is risk.

Dr. Skelsey disagreed; there is too much ambiguity about the potentials of the devices.

Ms. Hesser disagreed and said there is not enough information to know.

Dr. Rotemberg agreed with FDA.

Dr. Alam agreed with FDA.

Dr. Bourelly agreed with FDA on the basis of the definition of 'adjunct.'

Dr. Suarez-Almazor was neutral; not enough is known to determine risk.

Dr. Farber disagreed – not enough information.

Ms. Block agreed provided the devices are exclusively used as an adjunct.

Ms. Bush agreed.

Dr. Skates disagreed.

Ms. Block agreed.

Part 4

FDA believes there is sufficient information to establish special controls. Does the Panel agree or disagree?

Dr. Ballman disagreed and commented that it is not possible to establish performance standards in sufficient detail to form special controls.

Dr. Rotemberg agreed that there is enough data to know what questions to ask.

Dr. Alam disagreed, and urged FDA to maintain the current approval process.

Dr. Bourelly disagreed.
Dr. Pisarik disagreed.
Dr. Suarez-Almazor disagreed.
Dr. Farber disagreed.
Ms. Block disagreed, but noted significant progress was made over the prior two days in beginning to define these important parameters.
Ms. Bush disagreed, but asserted that special controls will eventually be definable as more information is accumulated.
Dr. Gualtieri disagreed and supported a Class III designation.
Dr. Skates disagreed and emphasized the importance of very clear special controls.
Ms. Hesser disagreed.
Dr. Skelsey disagreed on the basis of lack of information.
Dr. McGrath disagreed and emphasized the risk that down-classification would exempt companies from stringent analysis by FDA.

Question 3

FDA proposed the following special controls:

1. Clinical performance testing will demonstrate acceptable sensitivity and specificity.
2. Nonclinical performance testing will determine acceptable sensitivity and specificity.
3. Nonclinical testing will demonstrate that the device operates as intended under the ants us pated conditions.
4. Software validation and verification and cybersecurity testing will be completed in compliance with standards.
5. Thermal, mechanical, electric, electromagnetic and light safety testing will be completed in compliance with the standards.
6. Bio-compatibility, shelf life, and sterilization processes will be demonstrated to comply with the standards.
7. Human factors testing and hazard analysis will be performed to acceptable standards.
8. Labeling will provide adequate information on
    i. distinction operations
    ii. intended use
    iii. intended users
    iv. intended patients
    v. intended lesions and body sites
    vi. interpretation of outputs
    vii. caution against over-reliance on output
    viii. device maintenance and cleaning
    ix. the known sensitivity of the device

The Panel was asked if they agree that these proposed special controls appropriately mitigate the identified risks to health, and to recommend additional or different special controls.

Dr. Rotemberg disagreed. She said that clinical testing will demonstrate sensitivity and specificity, which the Panel mostly agrees are poorly-defined parameters, and testing improvement in standard of care in prospective studies to show improvement and acceptable

risk-benefit ratio. She posed that more detail is needed in the clinical controls, and the non-clinical performance testing may be hindered by data transparency issues.

Dr. Alam disagreed on the basis of vague phrasing and ambiguity of sensitivity and specificity testing in AI/ML technology.

Dr. Farber noted that more robust studies are needed.

Dr. Burke disagreed; the controls do not address device usage trickling down to the lay population.

Ms. Bush disagreed and reiterated concerns about clarity in the FDA's language, especially surrounding false negatives, demographics, and software standards.

Dr. Skelsey disagreed due to insufficient information.

Dr. Ballman disagreed and stated the proposed standards and solutions are unclear.

Ms. Block disagreed and suggested more devices in Class III be studied before moving any to Class II.

Dr. Roth agreed and strongly supported the restriction of device usage to

Dr. Bourelly disagreed. She found the controls appropriate but insufficient.

Dr. Skates said special controls imply Class II, and he does not support Class II designation.

Ms. Hesser expressed it is not the right time to down-classify.

Dr. Gualtieri took issue with the jumbled and excessive language of the labeling requirements.

Dr. Bryant concluded by commending the FDA for the questions and robust discussion. He drew attention to the importance of increased access to care and the ethical importance of democratizing technologies where possible.

Before closing, **Dr. Ashar** directly asked **Dr. Rotemberg** for advice about the extent to which transparency is necessary pertaining to the technologies in question.

In reply, **Dr. Rotemberg** asserted that extensive detail is necessary in labeling, highlighting patient population, distributions, sources of bias, and other metadata.

Dr. Ashar also requested examples, from dermatology or related industries, where post-marketing surveillance has been effective.

Dr. Rotemberg used VARS as an example and provided brief thoughts on how to regulate data drift and sampling mechanisms.

In final comments, **Dr. Bryant** thanked the Panel and FDA. **Ms. Hesser** urged FDA to consider patient preference and patient-reported outcomes and to implement patient education programs during future SRA regulatory deliberations.

ADJOURNMENT

Dr. Harris thanked the participants and adjourned the meeting at 2:52 p.m.

I certify that I attended this meeting on July 29, 2022 and that these minutes accurately reflect what transpired.

Candace J. Nalls -S

Digitally signed by Candace J. Nalls -S
Date: 2022.10.12 16:04:08 -04'00'

Candace Nalls

Designated Federal Officer

I approve the minutes of this meeting as recorded in this summary.

Hobart Harris, M.D., M.P.H.

Chairperson