SUMMARY MINUTES

CENTER FOR DEVICES AND RADIOLOGICAL HEALTH

GENERAL AND PLASTIC SURGERY DEVICES PANEL

October 20, 2021

Via Videoconference

Attendees:

Chairperson

Frank R. Lewis, Jr., M.D.
American Board of Surgery
Philadelphia, PA

Voting Members

Karla V. Ballman, Ph.D.
Weill Cornell Medicine
New York City, NY

Mary H. McGrath, M.D., M.P.H., F.A.C.S.
University of California, San Francisco
San Francisco, CA

Temporary Non-Voting Members

Pierre M. Chevray, M.D., Ph.D.
Houston Methodist Hospital
Houston, TX

William L. Hickerson, M.D., F.A.C.S.
University of Tennessee Health Science Center
Memphis, TN

Philip Hoffman, M.D.
University of Chicago Medicine
Chicago, IL

Ann Marilyn Leitch, M.D.
The University of Texas Southwestern Medical Center
Dallas, TX

Stephen Li, Ph.D.
Biomaterials
Palm Harbor, FL

Alan Matarasso, M.D., F.A.C.S.
Hofstra-Northwell School of Medicine
New York, NY

Colleen McCarthy, M.D.
Memorial Sloan Kettering Cancer Center
New York, NY

Ruth M. Parker, M.D., M.A.C.P.
Emory University
Atlanta, GA

Christianne Roumie, M.D., M.P.H.
Vanderbilt University School of Medicine
Nashville, TN

Howard Sandler, M.D.
Cedars-Sinai Medical Center
Los Angeles, CA

Industry Representative

P. LaMont Bryant, Ph.D.
Ethicon, Inc.
Somerville, NJ

Consumer Representative

Rachel S. Brummert, M.S.
The American Society of Pharmacovigilance
Charlotte, NC

Patient Representative

Natalie Compagni Portis, Psy.D.
Private Practice Offices
Sonoma and Oakland, CA

Food and Drug Administration

Cynthia Chang, Ph.D.
CDRH/ODE Division Director
Infection Control and Plastic
and Reconstructive Surgery

Binita Ashar, M.D.
Director, Office of Health Technology 4
(OHT 4: Surgical and Infection Control Devices)
Office of Product Evaluation and Quality

Candace Nalls
Designated Federal Officer

CALL TO ORDER
PANEL INTRODUCTIONS

Panel Chairperson Frank R. Lewis, Jr., M.D., called the meeting to order at 9:00 a.m. He noted the presence of a quorum and affirmed that the Panel members had received training in FDA device law and regulations. He announced that the Panel would be discussing, making recommendations, and voting on information regarding the premarket approval application for the SurgiMend PRS Acellular Bovine Dermal Matrix.

He then asked the Panel members and the FDA staff to introduce themselves.

CONFLICT OF INTEREST STATEMENT
TEMPORARY NON-VOTING MEMBER STATUS STATEMENT
GENERAL ANNOUNCEMENTS

Candace Nalls, Designated Federal Officer, read the Conflict of Interest statement and reported that no conflict of interest waivers had been issued.

She read the Appointment to Temporary Voting Member Status Statement and appointed Drs. Pierre M. Chevray, William L. Hickerson, Ann Marilyn Leitch, Stephen Li, Alan Matarasso, Colleen M. McCarthy, and Howard M. Sandler as temporary voting members, and Dr. Lewis as temporary Chair.

She announced that Drs. Philip Hoffman, Ruth Parker, and Christianne Roumie had previously been appointed to serve as temporary voting members, and Dr. Natalie Compagni Portis as temporary non-voting patient representative. She also introduced Dr. P. LaMont Bryant as the industry representative.

She then made general announcements regarding speaker identification and transcripts, and introduced Audra Harrison as the press contact.

SPONSOR PRESENTATION

Purpose of Panel Meeting

Glenn Coleman, Executive Vice President and Chief Operating Officer of Integra LifeSciences, gave opening remarks and noted that company representatives would be presenting data to support the approval of the SurgiMend PRS ABDM for immediate, two-stage, submuscular, alloplastic breast reconstruction. He then outlined the presentation and introduced the speakers.

Description of SurgiMend PRS ABDM

Thomas Gilbert, Ph.D., reviewed the proposed indications for use, product design and material characterization, and the device's intended function.

Clinical Context: Breast Reconstruction after Mastectomy in the U.S.

Robert Grant, M.D., noted that 60% of women who undergo breast reconstruction in the United States choose two-stage alloplastic reconstruction and that ADMs are used in the

majority of these cases. He described the placement and purpose of the device during the first and second stages of reconstruction, and discussed the reasons why surgeons are electing to use ADM in this specific procedure.

The Surgeon's Perspective

David M. Adelman, M.D., Ph.D., shared his experience and viewpoint as a reconstructive breast surgeon. He discussed the advantages and disadvantages of ADMs, and noted that data regarding SurgiMend explicitly implies a tissue regeneration mechanism that is very different from scar formation. He emphasized the importance of approval of the device due to growing concerns from patients and physicians about off label use of ADMs, and that it will set the stage for future PMA-based evaluation of other ADM products.

Regulatory History

Diana Bordon, M.S., RAC, reviewed steps taken by FDA and the sponsor to identify the appropriate means of studying SurgiMend for breast reconstruction. Real-world evidence was agreed upon as the most adequate way of demonstrating safety and effectiveness, and de-identified data from the Mastectomy Reconstruction Outcomes Consortium Study was used, with FDA statisticians performing analyses from the conjointly developed statistical analysis plan independent of the sponsor. She related that SurgiMend has been used off label for breast reconstruction since its clearance in 2007, noting that it is specifically indicated for plastic and reconstruction surgery.

The MROC Study

Sandra Berriman, Ph.D., looked at the reasons why the MROC study is a relevant and reliable clinical data platform for the SurgiMend study. She presented an overview of the inclusion/exclusion criteria, study design, and conduct.

SurgiMend Study Design

Dr. Berriman provided details on the study population and components of the pre-specified primary endpoint. She noted that the primary endpoint demonstrated superiority of the treatment group compared to control and that this result is strongly supported by directional outcomes in pre-configured sensitivity and exploratory analyses.

Chuck Davis, Ph.D., discussed the propensity score model used in the SurgiMend study. He provided a description of the patient stratification algorithm and presented the study results, noting that a statistically significantly higher proportion of subjects in the SurgiMend group achieved composite clinical success as compared to the control (no ADM) group and that in each of the sensitivity analyses, the proportion of subjects with CCS was directionally higher in the treatment group.

Dr. Berriman summarized the results of the primary endpoint analysis, noting that the pre-specified primary endpoint demonstrated superiority for the SurgiMend-treated group

as compared to control.

She then presented post hoc analyses conducted by FDA and summarized the overall results:

- The pre-specified primary endpoint analysis based on composite clinical success addresses both effectiveness and safety.
- The primary endpoint analysis met the pre-specified hypothesis of the superiority of SurgiMend compared with control.
- The multiple sensitivity and exploratory analyses pre-specified in the statistical analysis plan, as well as the post hoc analyses conducted by FDA, are directionally consistent with the primary endpoint analysis in favor of SurgiMend.
- Study results provide strong support for the effectiveness and safety of SurgiMend in comparison with no ADM for the proposed indication.

Published Literature

Dr. Gilbert presented the results from a comprehensive search of literature related to clinical studies that used SurgiMend for breast reconstruction and made the following conclusions:

- Women consistently report high levels of satisfaction with breasts after reconstructive procedures using SurgiMend.
- The reported complications are those expected by surgeons with breast reconstruction procedures in general, with or without an ADM.
- The data further support that SurgiMend meets the biocompatibility and mechanical design requirements for the intended use.

Training and Post-Approval Study

Dr. Berriman informed the Panel that the sponsor intends to offer refresher training in subpectoral SurgiMend implantation, various training platforms for surgeons who have experience with allograft ADMs but not SurgiMend, and educational workshops in partnership with the American Society of Plastic Surgeons. In addition, the company is proposing a prospective, multi-center, observational study of 150 subjects to be followed out five years post-op.

Benefit-Risk Assessment

Dr. Gilbert summarized the benefit and risk analysis. He affirmed that the totality of evidence thoroughly supports safety and effectiveness, that complications were less frequent, and that a higher proportion of subjects in the treatment group achieved composite clinical success as compared to control.

He also addressed the panel discussion questions and made the following points in support of the sponsor's conclusions:

- New animal studies would provide limited predictive value of clinical performance.
- The myriad of clinically available products would make bench testing of all combinations impracticable.
- The intended post approval study will supplement the existing clinical evidence of safety and effectiveness.

Q&A

Questions from the Panel:

Chairperson Lewis asked what type of supporting tissue was used in patients who did not have ADMs. He also asked what accounted for the seeming lack of antigenic reactions.

Christianne Roumie, M.D., M.P.H., asked if the alternate outcome, or no clinical success, was considered in any of the sensitivity analyses.

Philip Hoffman, M.D., asked if there were any problems with patients having to delay their chemotherapy treatments.

Karla V. Ballman, Ph.D., asked if there was follow-up data longer than two years and if there is any confidence that 90% five-year follow up will be achieved in a post-approval study.

Ann Marilyn Leitch, M.D., asked what proportion of the patients had human ADM compared to the ones that had SurgiMend.

Natalie Compagni Portis, Psy.D., Patient Representative, asked what is currently known about the impact of radiation on performance and adverse events.

Colleen McCarthy, M.D., asked what happens to physical well-being at the two-year mark.

Answers from the Sponsor:

Dr. Gilbert specified that the SurgiMend study did not compare SurgiMend against other supporting devices; that the patients with no ADM had no support. He explained that the antigenic materials are primarily found on cell surfaces within the tissue and are mostly eliminated during the decellularization process. He affirmed that the rate of missing data at one year was 0.8%, representing a single subject.

Dr. Adelman stated that he has not seen patients being hindered from starting adjuvant therapies because of SurgiMend.

Dr. Gilbert explained that Integra did not have access to the MROC data and was

therefore unable to conduct worst-case scenario analyses. He affirmed that the sponsor is confident it will have the opportunity to develop methodologies to improve data accountability for the study by analyzing case report forms, working with FDA, and utilizing electronic PROs. He also reminded the Panel that the data submitted for review is not for a prepectoral approach.

Dr. Adelman addressed questions regarding data from the terminated MD Anderson randomized trial. He indicated that the most recent studies have shown equivalency, if not potential superiority, of SurgiMend compared to other ADMs. He noted that the vast majority of two-stage implant-based reconstructions are still subpectoral. He conjectured that the use of an ADM, particularly SurgiMend, would have positive benefits for patients in regard to radiation and that the presence of an ADM may help decrease the incidence of capsular contracture.

Dr. Gilbert addressed questions relating to complications associated with other ADMs, and study design for long-term follow-up.

FDA PRESENTATION

Introduction and Background

S.W. Yoon, M.D., discussed the procedural aspects of immediate, two-stage, submuscular, implant-based breast reconstruction. She informed the Panel that to date, FDA has not cleared or approved any surgical mesh device specifically indicated for breast reconstruction. She reviewed the Panel's recommendations from the March 2019 meeting and FDA's recent safety communication regarding higher probabilities of complications or problems with certain ADM products used in these procedures.

SurgiMend Study Background

Felipe Aguel, Ph.D., presented background information on clinical evidence included in the PMA, discussed the use of the MROC study as a source of real-world evidence, and walked the Panel through the collaborative approach taken by FDA and the sponsor to analyze the MROC data. He also looked at the strengths and limitations of RWE as valid scientific evidence and its deficiencies in prospective study design.

Device Description, Biocompatibility Studies, and Mechanical Testing

Elda Treviño, Ph.D., explained the composition of the subject device, noting that the sponsor has opted to execute confirmatory biocompatibility tests plus mechanical testing of a tissue expander and breast implant device alone and in combination with the SurgiMend. In addition, chemical analyses on soluble and insoluble fractions of wear fluid used during mechanical testing are planned, along with assessment of surface properties and tensile strength.

Clinical Study

Dr. Yoon provided an overview of key clinical design elements and results from the SurgiMend study. She discussed inclusion/exclusion criteria, patient demographics, study protocol, and clinical composite success criteria. She noted that a higher proportion of patients in the SurgiMend group achieved success criteria as compared to control, and that the clinical composite success rate for the treatment group was statistically significantly higher.

MDR Analysis

Deborah Fellhauer, RN, BSN, presented a breakdown of adverse events from medical device reports specific to breast surgeries and the SurgiMend device. She indicated that the patient problems include flu-like symptoms, poor wound healing, pain, edema, infections, hypersensitivity, and allergic reaction.

Statistical Analysis Plan and Results

Yu Zhao, Ph.D., discussed study logistics, subject identification, and inclusion/exclusion criteria. She explained that the pre-specified primary endpoint was composite clinical success, that no formal hypothesis tests were pre-specified for the safety and secondary endpoints, and that a propensity score-based stratification approach was used to mitigate potential confounding. She noted that the observed CCS rate was higher in the SurgiMend group compared to control in each of the five strata, that the primary endpoint CCS rate was statistically significantly higher in the treatment group, that potential biases may still remain due to unobserved confounders, and that approximately 25% of CCS data are missing.

Q&A

Questions from the Panel:

Dr. Ballman asked the following questions:

- Were comparisons made between the two sites that used SurgiMend and those that did not?
- Were patient characteristics and demographics compared at baseline between subjects who received SurgiMend and those who received other ADM products?
- How confident is FDA that five-year follow-up data will be generated on more than 90% of the patients in a postmarket study?

Dr. Compagni Portis asked if there is data on the incidence of breast cancer recurrence, secondary cancers, and autoimmune disorders. She also asked how ADM may play into the complications seen with implants.

Dr. Leitch asked if differences in the implant types in the two groups could have influenced the choices for using ADM.

Howard Sandler, M.D., asked if the use of radiation in ADM increased or decreased

toxicities or response in terms of the study outcome.

Mary H. McGrath, M.D., M.P.H., F.A.C.S., suggested that cytological studies along with knowledge of the material's lifespan would aid in determining how long follow-up should be for postmarket surveillance.

Dr. Roumie requested a raw analysis without imputation for the BREAST-Q Physical Well-Being score.

Answers from FDA:

Binita Ashar, M.D., specified that FDA did not perform mechanical testing associated with the device.

Answers from the Sponsor:

Dr. Gilbert confirmed that no clinical failures were observed with the device and that development of compatibility testing for silicone implants and tissue expanders followed the standards for evaluation of these materials.

He explained that the product does not resorb over a period of two years but integrates into the surrounding tissue at the margins, that homeostasis occurs within the first year with no changes, and that no foreign body responses have been observed within the first two years. He affirmed that a tissue barrier develops between the implant and dermal matrix within the first few weeks post-op.

OPEN PUBLIC HEARING

Ian Saldanha, M.B.B.S., M.P.H., Ph.D., focused his discussion on a research question pertaining to the comparative benefits and harms of IBR with or without the use of human ADMs in breast reconstruction as part of a systematic review and meta-analysis conducted by his research team. He explained that the review consisted of 160 randomized trials and non-randomized comparative studies, and described the methodology that was used. He noted that conclusions were reached on five complications: implant failure or loss, infections, unplanned repeat surgeries, necrosis, and seroma, and that no conclusions were reached regarding clinical outcomes.

Madris Kinard-Tomes, M.B.A., explained how data in medical device reports can be confusing. She pointed out that patient problems are not always well coded, that unique device identifiers are not being used adequately, and that only very specific data is reviewed. She emphasized that narratives should be looked at, that ADM should be included in informed consent documents, and that a unique product code should be required to distinguish ADM from other types of mesh.

Diana Zuckerman, Ph.D., spoke on behalf of the National Center for Health Research. She stated that her main concern is that a recommendation is being sought based on 37 SurgiMend patients with successful outcomes, and that in this case, propensity adjustments did not help control confounding variables. She then made the following points:

- More than two-thirds of the reconstruction patients did not meet the criteria for clinical success in either group.
- Because only two facilities included the ADM patients, it cannot be determined if they are generalizable to most patients.
- Complications were only measured for one to two years.
- The MROC dataset does not include information on systemic symptoms, it provided limited information on serious adverse events, and it did not specify which version of the products were used.
- Some of the data for important outcomes were missing.
- There were no pre-specified hypotheses for secondary endpoints and for this reason, they cannot be considered.
- The coding of adverse events for ADMs is missing thousands of AE reports.

Maria Gmitro, president and co-founder of Breast Implant Safety Alliance, stated that patients have been uninformed, that there are more patients who did not have positive outcomes, and that better data is needed before approval. She requested that ADM be included in informed consent along with improved studies and better evidence to determine safety and effectiveness.

Allen Gabriel, M.D., FACS, enumerated the complications presented by aggressive mastectomies and pointed out that reconstruction without scaffolds has its own issues. He emphasized the importance of soft tissue support in breast reconstruction and noted that the use of scaffolds has been embraced by many surgeons.

Steven Sigalove, M.D., FACS, stressed the importance of pre-pec reconstruction and soft tissue support. He opined that supportive structures such as meshes and ADMs are essential for prepectoral reconstruction, that there is a higher rate of complications when they are not used, and that this procedure has become the leading form of prosthetic breast reconstruction worldwide.

Jesse Selber, M.D., M.P.H., MHCM, FACS, discussed the problems with total submuscular coverage and the advantages of using ADM as a lower pole support for the breast. He stated that SurgiMend is safe and effective, that its benefits outweigh the risks for proposed use, and that the majority of plastic surgeons are now using ADM for this purpose in breast reconstruction.

Marc Pearce, M.B.A., president and CEO of the American Association of Tissue Banks, pointed out that human ADMs are different from xenograft ADMs. He renewed the AATB's request for a public workshop to further discuss the regulation of human ADMs for breast reconstruction.

SPONSOR RESPONSE

Dr. Gilbert commented on the durability of the BREAST-Q dataset results. He noted that there were no statistical differences between the groups and that the results for Years 1

and 2 were very similar. He informed the Panel that there was a 13.1% difference in all major complications favoring SurgiMend and that the reoperation rate was also favorable for the treatment group. He expounded on changes that have occurred in the histological structure of the device over time and presented a slide showing no cell infiltration on the SurgiMend synovium at the four-month time point.

FDA RESPONSE

Cynthia Chang, Ph.D., presented findings from FDA's analysis of the MROC study data. She noted that patients with FlexHD and AlloMax had significantly higher complication rates of explantation, reoperation, and infections than those with SurgiMend, AlloDerm, or no ADM.

Dr. Zhao addressed questions regarding non-imputed data on the BREAST-Q. She pointed out that the mean scores for SurgiMend and control were 82 and 81 respectively at baseline, and 80 and 76 at Year 1. She also presented an analysis of CCS showing a success rate of 21% SurgiMend and 11% control for the subgroup receiving radiation therapy, and 32% SurgiMend and 20% control for the subgroup with no radiation.

PANEL QUESTIONS AND DELIBERATIONS

Questions from the Panel:

Dr. Hoffman asked the following questions:

1. Have there been issues with the device getting stuck or with not being able to separate the tissue expander?
2. Is there a reason, from the standpoint of the chemical or molecular makeup of the device, why anaplastic large cell lymphoma should not be anticipated at some later time?

Dr. Roumie asked if FDA's warning was related to bovine-derived or human-derived dermal matrices.

Answers from the Sponsor:

Dr. Adelman explained that the SurgiMend is well integrated with the surrounding capsule and cannot become attached to the tissue expander.

Dr. Grant pointed out that with smooth tissue expanders, there are no issues after the implant exchange and that SurgiMend has been used in other anatomical areas of the body for over a decade with no association to problematic conditions.

Dr. Gilbert specified that SurgiMend is compliant with all regulations relative to unique device identification and that there is a UDI associated with it.

Answers from FDA:

Dr. Chang clarified that three of the ADMs mentioned in FDA's safety communication are human and that the SurgiMend is bovine.

Deliberations:

Chairperson Lewis pointed out that the BREAST-Q score is only minimally dependent on the use of the SurgiMend and that only two of the nine centers in the MROC study contributed data regarding it. He questioned the validity of the data and opined that these are fundamental weaknesses that no amount of statistical manipulation can address. He further remarked that asking patients to evaluate technical decisions made at the time of surgery and using patients' postoperative satisfaction as a measure is a disconnect.

Dr. Leitch conjectured that another issue for effectiveness is the physician's opinion of the benefit of the procedure and that a questionnaire focused on surgeons' rationale could answer these questions.

Dr. McGrath noted that 82% of plastic surgeons are now using ADM, that the benefits of stabilizing the implant are clear, and that there may be less capsular contracture with the use of ADMs.

Dr. Compagni-Portis mentioned that most patients have no clue that there is mesh in their bodies and that they were not advised of it. She stressed the importance of informed consent and of the fact that all mesh is not the same, that there are differences in performance and safety.

Dr. Ballman remarked that there has to be some measurable effect to show that there is benefit to putting this extra device into the body.

Pierre M. Chevray, M.D., Ph.D., asserted that he does not think the evidence presented has shown safety and effectiveness. He stated that he does not use ADM, that surgeons who do not look out for their patients' best interests can talk them into doing whatever method the surgeon wants, and that he believes a randomized controlled trial can be done. He also pointed out that several of the physicians who spoke in favor of SurgiMend and other ADMs have been paid hundreds of thousands of dollars by companies who manufacture ADMs and that he questions the integrity of their opinions.

Alan Matarasso, M.D., F.A.C.S., reminded the Panel that the topic for discussion is subpectoral, not prepectoral, breast reconstruction.

Stephen Li, Ph.D., stated that the safety and efficacy data do not appear to support the device and that it probably is possible to do a controlled study.

Dr. Ballman advised caution in looking at the data and expressed concern about the short amount of follow-up.

Ruth M. Parker, M.D., M.A.C.P., made the following points:

- the data presented is not sufficient to support safety or efficacy;
- the lack of data does not allow for an assumption to be made that the device is safe and effective; and
- a randomized controlled trial is necessary for obtaining the kind of data to support an adequate assessment of risks and benefits.

William L. Hickerson, M.D., F.A.C.S., surmised that a post-approval study would

be useful for collecting a lot of the data, that the safety has been shown, and that the effectiveness is there based on the fact that the device is being used and because of the decrease in complications.

Rachel S. Brummert, M.S., Consumer Representative, remarked that she has not seen the kind of data that the PMA process is supposed to generate and that the surgeons who spoke in the open public hearing were more concerned with aesthetics than with safety.

Dr. Chevray added that the synthesis of data has shown that ADM slightly increases the risk for seroma and infection, and that recent data has revealed that it increases the risk for reconstructive failure or explantation of the implant. He urged FDA to require more definitive, convincing data to show that it does not present a higher risk of complications.

Dr. Gilbert commented that he appreciates the attempts to bring the focus back to SurgiMend PRS ABDM for subpectoral, immediate, implant-based breast reconstruction. He emphasized that prepectoral breast reconstruction is not being considered nor is other human ADM.

FDA QUESTIONS

A video recording of the discussion questions was played.

Question 1: The sponsor performed, or plans to perform, non-clinical evaluations including biocompatibility and mechanical testing. In addition, clinical data were provided. Please comment on whether additional animal studies are necessary to address the time course of product absorption and tissue response to the implanted device when used next to a tissue expander or breast implant.

Question 2: The sponsor plans to perform mechanical compatibility testing with a textured tissue expander and a smooth breast implant device. Please comment on whether additional non-clinical studies are necessary to evaluate mechanical compatibility of SurgiMend PRS ABDM with the existing range of tissue expander and breast implant devices.

Question 3: Does the Advisory Committee believe a post-approval study is needed for the SurgiMend PRS ABDM (if approved)? If a post-approval study is needed, is the proposed post-approval study acceptable? If not, please recommend changes to the proposed post-approval study.

Question 1 discussion:

Dr. McGrath advised additional cytological studies, noting that the two-stage procedures would provide an opportunity for further analysis of extracted tissue.

Dr. Leitch insisted that animal studies would not provide the kind of information needed to address the concerns that have been raised. She recommended supplementary histological data from human sources.

Chairperson Lewis noted that the Panel believes it is no longer the time for animal data and does not recommend it.

Question 2 discussion:

Dr. Leitch stated that nonclinical studies may not offer much information on this point.

Dr. Li said that preclinical testing would only be appropriate if it is known what to test for.

Dr. McGrath suggested that the tests be performed on smooth expanders instead of textured due to differences in thickness and composition.

Chairperson Lewis noted that the Panel is of the opinion that nonclinical studies will be of little benefit in this instance and that the focus should be on clinical studies.

Question 3 discussion:

Dr. Ballman recommended a post-approval study with at least 90% complete five-year follow-up data, data collection at the start of adjuvant treatment, and additional effectiveness data.

Dr. Leitch suggested a larger study with five-year follow-up and partnering with healthcare professionals who routinely follow these patients.

Dr. Sandler advised facilitators to ensure that the radiation question is captured. He also recommended assessment of interaction between mesh and radiation.

Dr. Hickerson advised five-year follow-up, data collection of adjunct therapy, and biopsies of the capsule at the time of permanent implant.

Dr. Roumie suggested recruitment of subpectoral and prepectoral patient groups, analysis of both groups to determine the effects of ADM, long-term follow up, and a wider view of ADM.

Dr. Ashar asked the Panel for recommendations regarding the appropriate control and endpoints in addition to BREAST-Q.

Dr. McCarthy suggested a three-armed study consisting of control, prepectoral reconstruction, and ADM-assisted subpectoral.

Dr. McGrath advised doing a separate study on prepectoral reconstruction.

Dr. Roumie suggested rheumatological endpoints.

Dr. Leitch recommended data collection on the reasons why certain types of procedures are selected and impressions of aesthetic outcome.

SUMMATIONS

Dr. Gilbert thanked the Panel. He reiterated that the MROC data was recognized by the Panel in 2019 as a potential source of data for real-world evidence. He emphasized that although prepectoral breast reconstruction is increasing, the sponsor's focus for the meeting is on subpectoral.

FINAL COMMENTS

P. LaMont Bryant, Ph.D., Industry Representative, encouraged continued leverage of the value of real-world documentation and evidence in conjunction with clinical data.

Dr. Portis strongly urged against approval without having substantial long-term data. She emphasized the importance of understanding the risks and challenges of ADM, and its inclusion in informed consent.

PANEL VOTE

Ms. Nalls read the safety and effectiveness definitions. She explained the voting procedure and read the voting questions.

Question 1: Is there reasonable assurance that the SurgiMend PRS ABDM is safe for the proposed indications for use?

The Panel voted 7 yes, 5 no.

Question 2: Is there reasonable assurance that the SurgiMend PRS ABDM is effective for the proposed indications for use?

The Panel voted 5 yes, 6 no, with 1 abstention.

Question 3: Do the benefits of the SurgiMend PRS ABDM outweigh the risks for the proposed indications for use?

The Panel voted 5 yes, 7 no.

Chairperson Lewis asked the Panel members to discuss their votes.

Dr. Leitch indicated that she voted no on safety and no for the benefits outweighing the risks. She stated that she would change her vote if she was certain that the postmarket study will have long-term follow-up.

Dr. Ballman indicated that she voted no on all three questions. She stated that she has concerns about long-term effects and that she is unsure about the generalizability of the results.

Dr. McGrath indicated that she voted yes on all three questions.

Dr. Chevray indicated that he voted no on all three questions. He stated that the data has not convinced him of safety and effectiveness.

Dr. Hickerson indicated that he voted yes on all three questions.

Dr. Li indicated that he voted no on all three questions. He stated that the dataset for ADMs was very small and that there was not much granularity in the analysis of the result.

Dr. Hoffman indicated that he voted yes on all three questions.

Dr. Matarasso indicated that he voted yes on Questions 1 and 3, and abstained on Question 2. He stated that he is concerned about the issues that were raised with respect to the MROC study.

Dr. McCarthy indicated that she voted yes, no, and no.

Dr. Parker indicated that she voted no on all three questions. She stated that there is insufficient data to support the safety and efficacy.

Dr. Roumie indicated that she voted yes, no, and no. She stated that she finds it curious that devices such as these are not required to be part of the informed consent process.

Dr. Sandler indicated that he voted yes on all three questions.

ADJOURNMENT

Chairperson Lewis thanked the Panel, FDA, and the sponsor. He then adjourned the meeting at 4:00 p.m.

I certify that I attended this meeting on October 20, 2021 and that these minutes accurately reflect what transpired.

Candace J. Nalls -S

Digitally signed by Candace J. Nalls -S
Date: 2022.09.19 17:10:23 -04'00'

Candace Nalls
Designated Federal Officer

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

_____/S/_____
Frank R. Lewis, Jr., M.D.
Chairperson

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