

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

HEALTH AND MEDICINE DIVISION
Board on Health Sciences Policy
Board on Health Care Services

**Committee on Assessment of Strategies for Managing Cancer Risks
Associated with Radiation Exposure During Crewed Space Missions**

Meeting #2: January 25 & 26, 2021

TIMELINE:

Day 1, January 25: 11:00 AM – 3:00 PM ET

Day 2, January 26: 11:00 AM – 3:00 PM ET

DAY 1: Monday, January 25, 2021

11:00 a.m. Welcome and Opening Remarks to Public Audience

HEDVIG “HEDI” HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*

11:15 a.m. Session 1: Statement of Work

J.D. POLK, *Chief Health and Medical Officer, NASA*

- Charge to the committee (what is included and excluded?)
- Description of the NASA strategies the committee is being asked to consider
- Why is NASA considering an update to the radiation standard

11:35 a.m. Discussion with committee

Moderator: HEDI HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*

12:00 p.m. Session 2: Background on NASA Radiation Standard

EDWARD SEMONES, *Space Radiation Analysis Group, NASA Johnson Space Center*

LISA SIMONSEN, *Radiation Technology Integration, NASA HQ*

- Space Radiation Overview, History, NSCR Model, Implementation
- International Partner Standards

12:45 p.m. Discussion with committee

Moderator: JULIAN PRESTON, *U.S. Environmental Protection Agency, Committee Vice Chair*

- 1:30 p.m. **Break**
- 1:45 p.m. **Session 3: Health and Medical Risk Characterization at NASA**
- ERIK ANTONSEN, *Assistant Director for Human Systems Risk Management, NASA Johnson Space Center*
- Risk Characterization
 - Comparison of radiation risks to health and medical risk
 - Radiation working group discussion points
- 2:10 p.m. Discussion with committee
Moderator: HEDI HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*
- 2:50 p.m. **Closing Remarks**
- HEDI HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*
- 3:00 p.m. **Adjourn Day 1**
-

DAY 2: Tuesday, January 26, 2021

- 11:00 a.m. **Welcome and Opening Remarks to Public Audience**
- HEDVIG “HEDI” HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*
- 11:15 a.m. **Session 4: Sex Difference Considerations**
- S. ROBIN ELGART, *Space Radiation Element Scientist, NASA Johnson Space Center*
MARISA COVINGTON, *BIOETHICS DIRECTOR, NASA HQ*
- Human Research Program Radiation Overview
 - Focus on studies related to sex differences/cancer incidence
 - Bioethics Considerations on Sex Differences
- 11:35 a.m. Discussion with committee
Moderator: HEDI HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*
- 12:00 p.m. **Session 5: Cancer Incidence within the Astronaut Corps**
- MARY VAN BAALEN, *Lead, Lifetime Surveillance for Astronaut Health, NASA Johnson Space Center*
- Assessment of crew cancer incidence/exposure
 - Comparison to similar populations

- 12:20 p.m. Discussion with committee
Moderator: JULIAN PRESTON, *U.S. Environmental Protection Agency, Committee Vice Chair*
- 1:00 p.m. Break
- 1:15 p.m. **Session 6: Astronaut Office Perspective**

SERENA AUNON-CHANCELLOR, *Astronaut*
 - Crew Perspective
- 1:30 p.m. Discussion with committee
Moderator: HEDI HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*
- 2:00 p.m. **Session 7: NASA Proposed Standards and Summary**

DAVID FRANCISCO, *Technical Fellow for Human Spaceflight Standards, NASA HQ*
J.D. POLK, *Chief Health and Medical Officer, NASA HQ*
EDWARD SEMONES, *Space Radiation Analysis Group, NASA Johnson Space Center*
 - Factors considered for modified standard – e.g., Confidence Interval, sex/age differences, dose based, bands, effective risk informing
 - Proposed standards for consideration
 - Summary
- 2:20 p.m. Discussion with committee
Moderator: JULIAN PRESTON, *U.S. Environmental Protection Agency, Committee Vice Chair*
- 2:50 p.m. **Closing Remarks**

HEDI HRICAK, *Memorial Sloan Kettering Cancer Center, Committee Chair*
- 3:00 p.m. **Adjourn Meeting**