



SCHOOL OF MEDICINE

Department of Radiation Medicine

Our [department's rich history](#) began in the mid-20th century and will continue to be a pioneering force in radiation oncology in the 21st century. The challenges that our nation faces on multiple fronts will not stop our progress. We are proud of the tremendous job our team continues to do working together. The reconfigured newsletter serves as a testament to just a small portion of exciting things occurring in the Radiation Medicine program. On behalf of all of the entire department, I express gratitude to the contributors and, especially, the managing editor, Ms. Jennifer Ramirez, for creating such a lovely summary of our department's activities in 2020. Please feel free to [contact Ms. Jennifer Ramirez](#) for contributions to future issues.

Charles R. Thomas, Jr., M.D.

Chair, Radiation Medicine, OHSU School of Medicine



Photo info, from left to right: Bonnie Luedloff R.T.T. (radiation therapist), Anja Goerke R.N. (radiation nurse), Jenna Kahn M.D. (radiation oncologist), Richard Crilly Ph.D. (radiation physicist), Christopher Deig M.D. (radiation oncology resident), Ross Brody Ph.D. (radiation physicist).

New radiation therapy options for OHSU patients

In November 2020, [Jenna Kahn, M.D.](#), performed OHSU's first MRI-guided interstitial brachytherapy procedure to treat cervical cancer. It is a radiation treatment option for Oregonians that involves placing needles directly into cancerous tissue using MRI technology for planning and guidance.

During brachytherapy, which is sometimes known as internal radiation, a radiation source is put inside or next to an area requiring treatment. "It

allows us,” explains Kahn, “to give a higher dose of radiation to a tumor while reducing radiation to surrounding organs and tissues at risk.”

Since that first interstitial brachytherapy, Kahn says, “it’s been a whirlwind. We have multiple patients in one month who need this treatment and may otherwise not have received it. We are seeing people from all over Oregon, including the cities of Coos Bay, The Dalles, Roseburg, and Bend.”

OHSU is the only program in the state offering this type of MRI-guided brachytherapy that improves both technique and survival.

Dr. Kahn was recruited to OHSU to restart and build the new MRI guided brachytherapy program in 2019. After pandemic delays, she and her team started treating patients in August.

The team will start treating prostate cancer in the spring and plans to expand the breadth of the program by treating conditions including skin cancer, biliary cancer, head and neck cancer, and sarcoma are in the works.

Brachytherapy, Kahn says, is one of the truest forms of radiation oncology, as its use dates back to the early 1900s, when doctors inserted needles into cancerous breast tissue. [Richard Crilly, Ph.D.](#), the medical physicist on the team, explains that brachytherapy fell out of favor for many years in the U.S. and external beam radiation became the dominant treatment.

European experience showed that the five-year survival rates when brachytherapy was incorporated in treatment were much better. “When brachytherapy is coupled with MRI technologies the 5-year survival rate rises to 25% more than with external beam alone,” says Crilly.

With improved techniques and new technologies, brachytherapy is undergoing a twenty-first century renaissance.

As well as offering patients access to new treatments, OHSU's new program will address the continuing decline of radiation oncology resident training in brachytherapy. "Because we had gone without brachytherapy in this country for so long there is a dearth of properly trained residents who know how to do it," says Crilly. "It's a much more hands-on treatment than external radiation. The physician needs to be skilled at putting applicators and needles right into the cancer itself."

The skills of brachytherapy are required for radiation oncology residents and as a teaching facility, this program will continue to grow and teach OHSU residents as well as train medical physicists.

Coupling a very old technique like brachytherapy with new applicators and MRI technology is exciting from a research perspective too. "It presents a whole range of areas that we are and should be looking into," Crilly says.

He is commissioning and testing a shipment of state-of-the-art applicators and is anticipating the acquisition of a 3D printer: "The idea is that I can build applicators designed for an individual to be placed exactly where I want it in a cavity or on a surface."

Both he and Kahn emphasize that brachytherapy is a collaborative treatment between patients, gynecology oncology, oncologists, anesthesia, OR staff and our radiation medicine staff.

"It really has been a team effort to develop this program," says Kahn.



The Department of Radiation Medicine, along with radiation professionals around the world, celebrated [Marie Curie's](#) birthday and brought awareness to female radiation oncologists by participating in the Society for Women in Radiation Oncology [#WomenWhoCurie](#) campaign.

Announcements

About the team

We celebrated some retirements and new team members in 2020.

In July, we reluctantly said goodbye to **John Holland, M.D.**, after 25 years

of superb and dedicated service, and to our therapist **Janet Garrett** after 15 years of knowledge and guidance with the department. July also brought us two new residents **Jehan Yahya, M.D.**, and **Kim Ohaegbulam, M.D., Ph.D.**

Summer and fall were busy with some new faces joining our team. Radiation Medicine welcomed **Amy Hamala (RTT)**, **Lisa Edwardson (PAS)**, **Hannah Smith (RTT)**, and **Emily York (MA)**, **Caroline King (RTT Student)**, and **Guadalupe Medina (Relief RTT)**.

We greeted our new faculty members [Blair Murphy, M.D.](#), and [Eric Chang, M.D.](#) Everyone thanked our Department Administrator, Joshua Cobbs, for his service as he returned to active military duty in September.

Around the Department

[Kiri Cook, M.D.](#), became the new Director of Clinical Research and **John Minger** (Research Associate) was promoted to Clinical Research Coordinator Team Lead in May.

[Jenna Kahn, M.D.](#), was selected to serve as the Editor, Gynecologic Cancers Section for the American Brachytherapy Society's Journal.

The American Association of Physicist in Medicine (AAPM) announced [Ross Brody, Ph.D.](#), was selected by his peers to serve as the next secretary/treasurer of the Northwest Region, beginning in January 2021.

This fall and winter proved hard work pays off with the first successful TOMO TBI completed by **Blair Murphy, M.D.**, and the team.

OHSU patient Lisa Wooden was the second in the U.S. to use a [new treatment for a rare form of cancer](#) and defied odds with a positive response after receiving Novocure TTF therapy spearheaded by **John Holland, M.D.**, and [Josh Walker, M.D., Ph.D.](#)

A collaboration between [Nima Nabavizadeh, M.D.](#), [Babak Nazer, M.D.](#), (Cardiology), and [Arthur Hung, M.D.](#), resulted in the first VT SBRT (radiotherapy) at OHSU (OR and WA). Dr. Nabaviadeh's honorable mention for essential members:

- **Debra Monaco** (Dosimetrist) - "Who was instrumental in developing this complex SBRT plan per our specifications"
- [Ross Brody, Ph.D.](#), [Kyle Gallagher, Ph.D.](#), **Brandon Merz, Ph.D.**, **Malcolm Heard, Ph.D.**, and **Austin Bunker, M.S.** - "Medical physicists and our stewards of safety"
- **Andrea Dupuis** (RTT), **Scott Madsen** (RTT) - "Radiation therapists as best as they come"



John Holland, M.D., retired after 25 years of superb and dedicated service.



Kim Ohaegbulam M.D., Ph.D., radiation oncology resident, and Jehan Yahya M.D., radiation oncology resident.



Blair Murphy M.D., radiation oncologist, and Eric Chang M.D., radiation oncologist.

Recent Publications

["Practice Parameter for Image-guided Radiation Therapy \(IGRT\)"](#)

Join Y. Luh, M.D. and Nima Nabavizadeh, M.D.
ACR-ASTRO

[“What happens next: Radiation oncology after COVID?”](#)

Ravi A. Chandra, M.D., Ph.D. and Charles R. Thomas, M.D.
ctRO

[“Distancing Without Isolation—Connection in the ERA of COVID-19”](#)

Kiri A. Cook, M.D. and Jenna M. Kahn, M.D.
JAMA Network

[“Connecting with Patients With Cancer in Spite of COVID-19”](#)

Kiri A. Cook, M.D.
Hi3 Health Oncology News and Perspectives

[“Advances in Radiation Oncology: Increasing Medical Student Engagement through Virtual Rotations in Radiation Oncology”](#)

Jenna Kahn, M.D., Loise Wairiri, MBBS, Nima Nabavizadeh, M.D., Charles R. Thomas, M.D., Ravi A. Chandra, M.D., Ph.D.
Astro

[“A Blinded, Prospective Study of Error Detection During Physician Chart Rounds in Radiation Oncology”](#)

Pehr E. Hartvigson, M.D.
CME ASTRO

[“Time-Driven Activity-Based Costing Analysis of Telemedicine Services in Radiation Oncology”](#)

Eric M. Chang, M.D.
International Journal of Radiation Oncology

[“Virtual visits, masks, social distancing complicate patient/oncologist connections”](#)

Kiri A. Cook, M.D. and Jenna M. Kahn, M.D.
HemOnc today



Tiffany Ashley, a radiation therapist at OHSU, [decorates masks for patients](#) undergoing treatment. She says "This has been my way to connect with patients—especially pediatric patients —and make them feel more comfortable and confident while being treated. The idea of radiation therapy can be scary, but decorating their mask can help some anxieties subside."

Faculty Accomplishments

Faculty members **Timur Mitin, M.D., Ph.D.**, and **Wencesley Paez, Ph.D.**, received a [Biomedical Innovation Award in the Digital Health Program](#) for "A Smartphone Mobile Application Using Artificial Intelligence for Pain Control and Management for Bone Metastases"

[Reid Thompson M.D., Ph.D.](#), has received the [ASTRO-Melanoma Research Alliance Young Investigator Award](#) for his research on treating

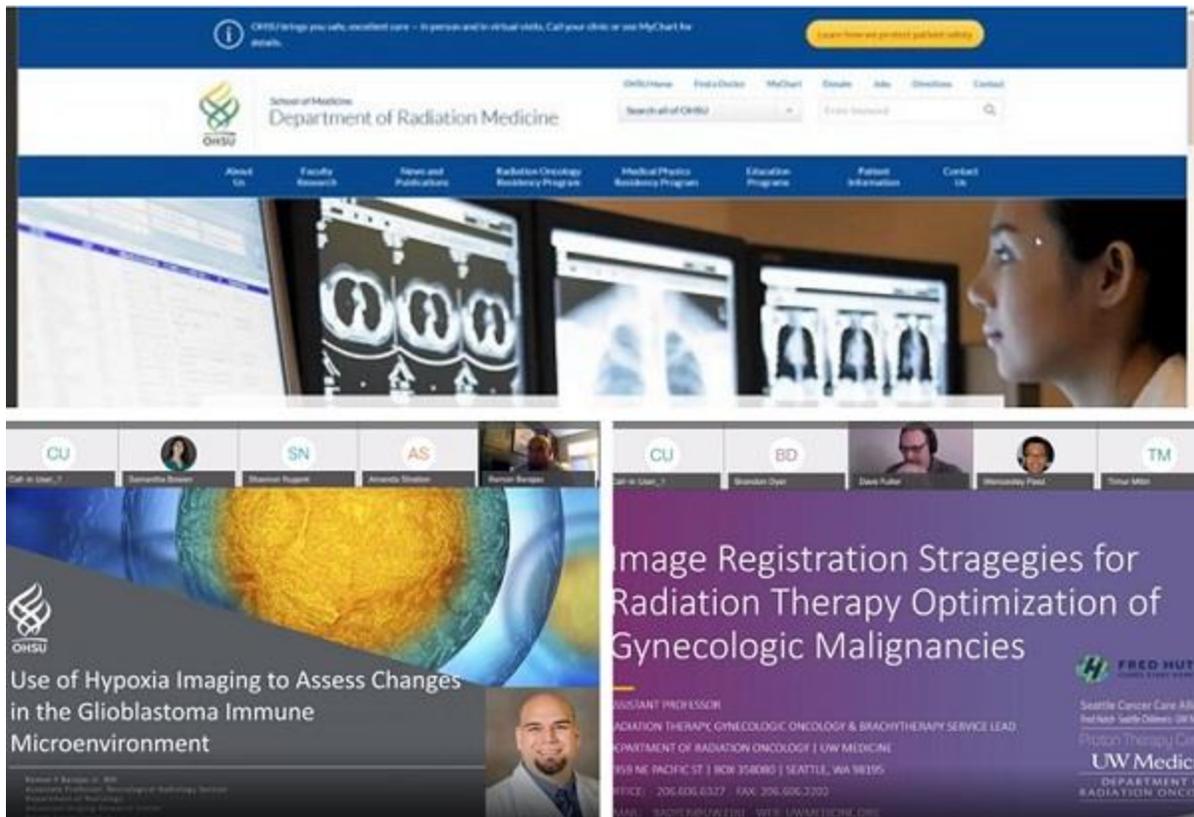
metastatic melanoma that has become oligoprogressive, that is, showing a limited degree of progression after initial suppression by drug therapy.

[Aaron Grossberg, M.D., Ph.D.](#), received funding from the OHSU Cancer Early Detection Advanced Research (CEDAR) center for his proposal titled, "CoVID Prediction Hub of Oregon - U.S. County COVID-19 Prediction." Dr. Grossberg's K08 grant was also officially approved, titled "Hepatic Metabolic Reprogramming Drives Pancreatic Cancer Cachexia."

Elena Andresen, Ph.D., Executive Vice President and Provost of OHSU awarded John Holland, M.D., with emeritus status for his distinguished past service to the institution after 26 years with the Radiation Medicine Department.

The [Walker Lab](#) and [Yantasee Lab](#) were selected as the awardee for FY21 Knight Spring Pilots - All Programs for their application "Activation of Immunogenic Cell Death Pathways in Colorectal Cancer Using Radiation-Enhancing Nanoparticles"

It was announced at the annual meeting that [Charles Thomas, Jr., M.D.](#), won SWOG's inaugural Mentorship Award. "Dr. Thomas was placed MILES ahead of other contenders for this award." - Jo Horn, President and CEO of The Hope Foundation.



14th Annual Research Retreat

Radiation Medicine held its annual Research Retreat virtually this year with 20 presentations and lots of collaboration during breaks. This jam-packed event was a huge success thanks to all of the presenters and individuals who participated.

Questions? [Email our team](#) or [visit our website](#) .

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