



Yuan James Rao, MD

Associate Professor of Radiation Oncology (Radiation Therapy)

Radiation Oncology - Radiation Therapy

CLINICAL OFFICE (PRIMARY)

- **Department of Radiation Oncology**

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Bio

BIO

Dr. Yuan James Rao is a board-certified radiation oncologist with Stanford Health Care. He is also an associate professor of radiation oncology and the associate director of proton therapy in the Department of Radiation Oncology, Division of Radiation Therapy at Stanford University School of Medicine.

As a radiation oncologist, Dr. Rao treats chest (thoracic) and head and neck cancers. He specializes in using proton therapy, a type of high-energy radiation therapy that precisely targets cancer cells while sparing surrounding tissue. The proton therapies he uses include 3D conformal radiation therapy, intensity modulated radiation therapy, and stereotactic body radiation therapy. He also uses brachytherapy, which treats cancer by placing radiation sources inside or very close to a tumor.

Dr. Rao's research interests include the use of proton therapy in treating various cancers. He has also studied the role of machine learning and advanced imaging techniques to improve radiation treatments. In addition, Dr. Rao has investigated ways to integrate immunotherapy into radiation treatment regimens.

Dr. Rao has published his work in and served as an ad hoc reviewer for several peer-reviewed journals, including Nature Cancer, Frontiers in Oncology, Advances in Radiation Oncology, and PLOS One. In addition, he has co-written chapters in books including Perez & Brady's Principles and Practice of Radiation Oncology and Pocket Guide to Radiation Oncology. He has presented his work nationally and internationally, including at meetings of the American Brachytherapy Society (ABS), American Society for Radiation Oncology (ASTRO), and European Society for Radiation Oncology.

Dr. Rao is a member of the ABS and ASTRO.

CLINICAL FOCUS

- Radiation Oncology

ACADEMIC APPOINTMENTS

- Associate Professor - University Medical Line, Radiation Oncology - Radiation Therapy

ADMINISTRATIVE APPOINTMENTS

- Member and University Representative, Radiation Oncology Education Collaborative Study Group, (2019- present)
- Associate Director of Proton Therapy, Department of Radiation Oncology, Stanford University School of Medicine, (2025- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, ASTRO (2014 - present)
- Member, ABS (2019 - present)

PROFESSIONAL EDUCATION

- Board Certification: Radiation Oncology, American Board of Radiology (2019)
- Residency: Mallinckrodt Institute of Radiology Washington University (2018) MO
- Internship: Mercy Hospital St Louis Transitional Year (2014) MO
- Medical Education: Washington University in St Louis School of Medicine (2013) MO

Publications

PUBLICATIONS

- **Radiotherapy in Men with De Novo Metastatic Prostate Cancer.** *The Urologic clinics of North America*
Messing, I., Rao, Y. J., Goyal, S.
2026; 53 (2): 285-301
- **Clinical characteristics, racial inequities, and outcomes in patients with breast cancer and COVID-19: a COVID-19 and cancer consortium (CCC19) cohort study.** *eLife*
Nagaraj, G., Vinayak, S., Khaki, A. R., Sun, T., Kuderer, N. M., Aboulafla, D. M., Acoba, J. D., Awosika, J., Bakouny, Z., Balmaceda, N. B., Bao, T., Bashir, B., Berg, et al
2023; 12
- **Clinical Characteristics, Racial Inequities, and Outcomes in Patients with Breast Cancer and COVID-19: A COVID-19 and Cancer Consortium (CCC19) Cohort Study.** *medRxiv : the preprint server for health sciences*
Nagaraj, G., Vinayak, S., Khaki, A. R., Sun, T., Kuderer, N. M., Aboulafla, D. M., Acoba, J. D., Awosika, J., Bakouny, Z., Balmaceda, N. B., Bao, T., Bashir, B., Berg, et al
2023
- **Machine Learning Algorithm Accuracy Using Single- versus Multi-Institutional Image Data in the Classification of Prostate MRI Lesions** *APPLIED SCIENCES-BASEL*
Provenzano, D., Melnyk, O., Imtiaz, D., McSweeney, B., Nemirovsky, D., Wynne, M., Whalen, M., Rao, Y., Loew, M., Haji-Momenian, S.
2023; 13 (2)
- **Interplay of Immunosuppression and Immunotherapy Among Patients With Cancer and COVID-19.** *JAMA oncology*
Bakouny, Z., Labaki, C., Grover, P., Awosika, J., Gulati, S., Hsu, C. Y., Alimohamed, S. I., Bashir, B., Berg, S., Bilien, M. A., Bowles, D., Castellano, C., Desai, et al
2022