OUR HISTORY

1962 — NUCLEAR MEDICINE BEGINS AT OHSU
Approximate start of Nuclear Medicine at OHSU, within the Department of Pathology. I-131 therapies are being done at this time.

1989 — NUCLEAR MEDICINE JOINS DIAGNOSTIC RADIOLOGY
Dr. Jeffrey Stevens is appointed the new Section Chief.

2007 — PET/CT CAMERA INSTALLED
FDG PET scans start.

2015 — XOFIGO THERAPY BEGINS
Approximate date of first therapy.

2016 — DOTATATE AND AXUMIN PET BEGIN
Start of NET and prostate PET.

2018 — LAUNCH OF THERANOSTICS PROGRAM
Dr. Erik Mittra appointed as Section Chief and Lutathera therapies start.

2019 — SECTION NAME CHANGES
Nuclear Medicine changes to Molecular Imaging and Therapy.

2020 — NUCLEAR MEDICINE ADDS SOUTH WATERFRONT LOCATION
Two SPECT/CTs installed as part of a larger imaging expansion project at CHH.

2021 — FIRST PET/MR CAMERA INSTALLED
First in the Pacific Northwest. PSMA PET also begins.

2022 — PLUVICTO THERAPY BEGINS

2024 — NEW CLINIC OPENS
Molecular Imaging and Therapy moves to new state-of-the-art clinic space in Hatfield Research Center. Amyloid brain PET and cardiac perfusion PET begin.

Our Team

Section Chief

Erik Mittra, M.D., Ph.D.

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OHSU

MOLECULAR IMAGING AND THERAPY

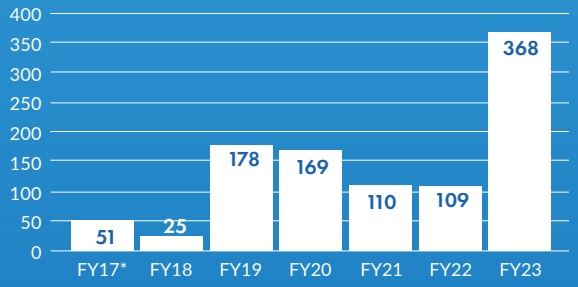
Theranostics Program

OHSU

Theranostics Program

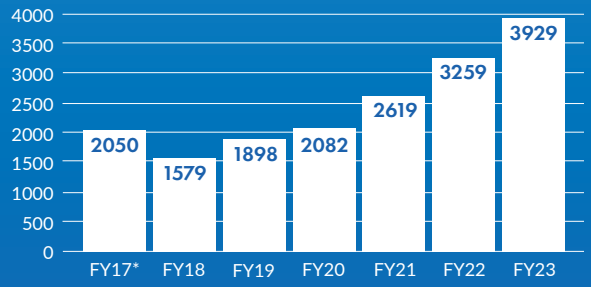
Nuclear Medicine originated with the first Iodine-131 therapy over 77 years ago and is now experiencing a resurgence with several new FDA-approved radiopharmaceuticals for imaging and therapy and many more in clinical trials, resulting in the burgeoning field of theranostics. The OHSU Theranostics Program launched in 2018.

THERAPY VOLUME



There has been a 621% therapy volume growth over the past six years, driven by these new therapies.

PET VOLUME



There has been a 90% PET volume growth over the past six years.

**Fiscal year runs July - June.*

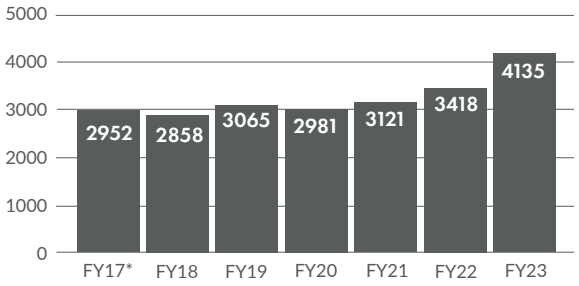
What is Theranostics?

Theranostics combines the words “therapy” and “diagnostics”, emphasizing the fusion of these approaches within one technology. The goal of theranostics is to personalize and thereby optimize medical treatment by tailoring it to the individual characteristics of a patient, often based on molecular information. While a general term in medicine, the clearest and most common example is in Molecular Imaging and Therapy.

What is Molecular Imaging and Therapy?

Molecular Imaging and Therapy (MIT, also called Nuclear Medicine) is a medical subspecialty that uses small amounts of radioactive isotopes to image and treat various diseases and conditions. The targeted radioactivity is administered internally and the emitted radiation is used to either create images (gamma and PET scans) or treat disease.

COMBINED MIT IMAGING AND THERAPY VOLUME



This section has seen a 47% growth over the past six years.

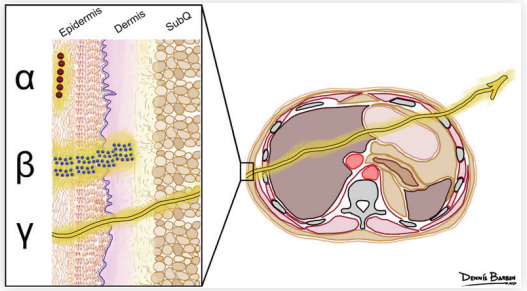


Illustration by Dennis Barbon, M.D.

These are the three main types of radiation used in MIT. Each interacts with tissue differently. As such, alpha particles can only be used for therapy, gamma rays are only used for imaging, and beta particles can be used for imaging or therapy.

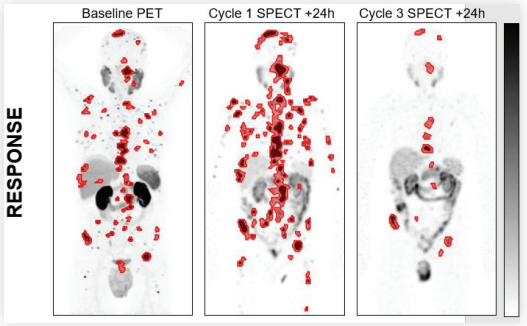


Figure by Caffi Meyer, Ph.D.

The power of theranostics is shown. Everything in red is metastatic disease which is visualized using PET imaging, while the improvement is a result of the therapy, both targeting the same receptor on the cancer cell.

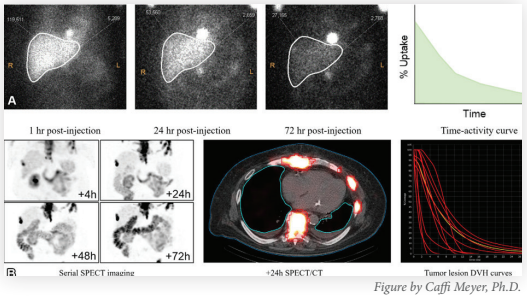


Figure by Caffi Meyer, Ph.D.

Based on the theranostics principle, OHSU MIT provides advanced patient specific dosimetry to help optimize the dose and further improve patient outcomes to the therapy.