What is MOLECULAR IMAGING?

MOLECULAR IMAGING is the visualization, characterization, and measurement of biological processes at the molecular and cellular levels in humans and other living systems.

IT CAN:
- Aid in early diagnosis and identification of functional changes in tissue
- Enable changes in individual patient management in real time
- Facilitate drug development

PERSONALIZED PATIENT CARE

Molecular Imaging:
- Accurately characterizes tumor properties or biological process and helps diagnose disease, assess therapeutic targets, monitor therapy, and evaluate prognosis. It is key for staging and staging of most common cancers, such as lymphoma, lung, breast, prostate, and colorectal.
- Offers unique insights into the management of cardiovascular disease. Molecular imaging allows the evaluation and management of ischaemic injury, heart failure, left ventricular remodeling, transplant rejection, atherosclerotic plaques, as well as thrombosis, atherectomy, angioplasty, and vulnerable plaque. In the future, monitoring of genetic or stem cell therapy will be possible.
- Is a very important diagnostic tool in the early assessment, risk stratification, evaluation, and follow-up of patients with neurological diseases. By accurately assessing regional brain blood flow and metabolism, cellular proliferation, and receptor activity, molecular imaging is playing an increasingly significant role in the diagnosis and management of conditions such as tumors, dementia (Alzheimer’s and others), movement disorders, seizure disorders, and psychiatric disorders.

RELEVANCE TO CANCER CARE

It Can:
- PersonalIzed PatIent Care (Alzheimer’s and others), movement disorders, seizure disorders, and psychiatric receptor activity, molecular imaging is playing an increasingly significant role in assessing regional brain blood flow and metabolism, cell proliferation, and evaluation, and follow-up of patients with neurological diseases. By accurately assessing regional brain blood flow and metabolism, cell proliferation, and receptor activity, molecular imaging is playing an increasingly significant role in the diagnosis and management of conditions such as tumors, dementia (Alzheimer’s and others), movement disorders, seizure disorders, and psychiatric disorders.

CLINICAL TRIALS NETWORK OVERVIEW

- Train researchers: support, communication, and collaboration.
- Ensure research subject safety and regulatory compliance.
- Facilitate the sharing of research data.
- Improve the efficiency and effectiveness of clinical trials.

CONCLUSION

- Future opportunities in molecular imaging.
- Advancements in imaging technologies and molecular probes.
- Collaboration and integration of imaging with other clinical and research tools.
- Continued progress in molecular imaging research.

www.snm.org/clinicaltrials
www.molecularimagingcenter.org