Before entering abstracts data, submitting authors will be required to select from one of the submitters below.

1. **Physician/Scientist/Pharmacist**: this is SNM’s PRIMARY abstract submission type, designed mainly for physicians, scientists, pharmacists, educators, and young professionals (fellows, residents, medical students) in the field of nuclear medicine and molecular imaging, but is open to all authors.

2. **Educational Exhibits**: this [poster-only program](#) is designed mainly for nuclear medicine residents/young professionals, program directors, and educators, but is open to submissions from all authors. Educational Exhibits, unlike other submissions, do not necessarily include new, original or scientific research, but MUST be educational in nature.

3. **Technologist Abstracts**: this program is designed primarily for technologists in the field of Nuclear Medicine and Molecular Imaging therapy and technology. Technologist abstract awards are determined onsite, and authors of award-winning abstracts are recognized during the Technologist Plenary session on Tuesday, June 8, 2010.

4. **Technologist Student Abstracts**: this program is designed exclusively for Technologist Students in the field of Nuclear Medicine and Molecular Imaging. Although authorship is not exclusively reserved for students, the presenting author must be a student in an accredited Nuclear Medicine Technologist program at the time of their abstract submission. **NOTE**: The corresponding author must upload, during submission, a letter from the institution, on official stationary (pdf), to verify student status.

Tracks and category descriptions for each of the submitter types are listed below.

**2010 ABSTRACT TRACKS AND CATEGORIES**

Abstract tracks and categories for the 2010 SNM Annual Meeting are listed below. Category descriptions follow the track listings. Track-specific award symposia are also included in the listings. Authors submitting to the Physician/Scientist/Pharmacist program have the option to indicate consideration for EITHER the track-specific Young Investigator Award (YIA) **OR** the Molecular Imaging Center of Excellence (MICOe) Young Investigator Award.

Other abstract awards that submitters can be considered for (by checking the “Apply” button during submission) include:

- Berson Yalow Award
- Correlative Imaging YIA/Walter Wolf Award
- Young Professionals Committee (YPC) Awards
- SNM and SNMTS Travel Awards (formal application required upon abstract acceptance)
- SNMTS Cardiovascular Council Award (technologists only)

Descriptions for categories, as well as awards, will be posted in the SNM submitter application at [www.snm2010.abstractcentral.com](http://www.snm2010.abstractcentral.com).
CATEGORY DESCRIPTIONS – Physicians/Scientists/Pharmacists

Cardiovascular Track

**Basic Science:** Pre-clinical in vitro or in vivo studies in cardiac or vascular disorders using animal models; camera and computer development specific to the cardiovascular system; studies of novel radiopharmaceuticals or use of isotopes for therapeutic applications in vascular disorders, including initial evaluation of their potential therapeutic efficacy in pre-clinical models.

**Clinical Science:** Clinical cardiac and vascular studies. This category includes both PET and conventional instrumentation and radionuclides.

**Cardiovascular Young Investigator Symposium:** SNM-sponsored symposium and competition, in association with the SNM Cardiovascular Council, for the best scientific abstracts on basic or clinical cardiovascular nuclear medicine. The objectives of the award are to identify promising young investigators working in cardiovascular nuclear medicine. All applicants must be currently enrolled or within five (5) years of a completed certified training program. All former first-prize winners are ineligible. To be considered for this prestigious awards symposium, submitting authors must check the designated box during their online abstract submissions for the SNM Annual Meeting. Only abstracts submitted to categories within the Cardiovascular track will be considered for this awards symposium.

Neurosciences Track

**Basic Science:** Evaluation of radiotracers for studying the CNS, including assessment of neuroreceptor systems, enzymes, gene expression, metabolic pathways and interaction of drugs with receptor systems (these may be in vitro or in vivo pre-clinical studies using animal models, or initial studies in humans); novel applications or methods of analysis in animals or humans which are not well-established or when the pathology is used as part of the validation of a method or radiopharmaceutical.

**Neurology:** Clinical investigations of neurologic disorders with established radiopharmaceuticals; clinical studies using newer radiotracers for neuroreceptor systems, enzymes, metabolic pathways, etc., to investigate disease pathophysiology; studies of tumors in the CNS; functional brain mapping studies in patients and normal subjects.

**Psychiatry:** Clinical investigations of psychiatric disorders with established radiopharmaceuticals; clinical studies using newer radiotracers for neuroreceptor systems, enzymes, metabolic pathways, etc., to investigate the pathophysiology of psychiatric disorders. Psychiatric disorders are considered broadly and include drug and alcohol abuse.

**Brian Imaging Council (Neurosciences) Young Investigator Award Symposium:** SNM-sponsored symposium and competition, in association with the SNM Brain Imaging Council, for the best scientific abstracts on neurosciences nuclear medicine. Only abstracts submitted to categories within the Neurosciences Track (listed above) will be considered for this awards symposium.
Instrumentation & Data Analysis Track

Some presentation topics may span two or three categories. Please try to select the most appropriate one in terms of the data stream: **Instrumentation -> Image Generation -> Data Analysis**. It may help to consider which peer group or audience you think should be the most interested in the material you will present.

**Instrumentation**: Development and evaluation of new instrumentation, new applications of existing instrumentation, and/or performance evaluation techniques.

**Image Generation**: Reconstruction algorithms (including comparison of methods); digital filtering; corrections for physical and systematic effects such as scatter, attenuation and motion correction.

**Data Analysis & Management**: Tracer kinetic modeling and parameter estimation methodology (submission to a basic science category in another track (e.g Oncology-basic or Neurosciences) should be considered if an established model is being used in a new clinical or research application); statistical analysis methods; image registration techniques; impact of image acquisition or processing on parameter estimation. Also included are topics on image displays, the use of Internet methods, image atlases and other data management systems.

**Computer and Instrumentation Council Young Investigator Award Symposium**: SNM-sponsored symposium and competition in association with the SNM Computer and Instrumentation Council, for the best scientific abstracts on computer and instrumentation nuclear medicine. Only abstracts submitted to categories within the Instrumentation & Data Analysis track will be considered for this awards symposium.

Radiopharmaceutical Chemistry Track

Abstracts should be submitted to one of the following categories if it relates to new probe development (design of new probe with some biological implication/background); newer synthesis methods/automation/altered recipes for enhanced yields or reduced hand-dose to chemist; in vitro and rodent biodistribution studies.

Abstracts should be submitted to one of the following categories if it describes the evaluation of new or existing ligands in small or large animals, microPET/microCT imaging, comparing one or more tracers in same animal models.

This year the submitting author can chose from 8 Radiopharmaceuticals categories, including the first 5 categories for **New Radiopharmaceuticals**. The category selected should reflect the abstract’s “best fit” for session placement:

1. **New Radiopharmaceuticals-Broader/General Applications**
   Development of new and novel radiopharmaceuticals designed to study various biological systems, enzymes, metabolic pathways, or development of novel probes designed to interrogate disease pathophysiology.
2. **New Radiopharmaceuticals-Neurosciences**
   In *vitro*/*in vivo* evaluation of existing and/or novel radiopharmaceuticals; evaluation of radiotracers in small and large animals for any of the transport or neuroreceptor systems, tumors of the CNS, and studies describing the uptake and distribution characteristics of radiotracers in the brain.

3. **New Radiopharmaceuticals-Novel Probe Development**
   Abstracts detailing design and synthesis of new and novel radiopharmaceuticals, possibly including (but not necessary) preliminary *in vitro* and/or *in vivo* data.

4. **New Radiopharmaceuticals-Oncology**
   Development of new radiopharmaceuticals for the detection and/or therapy application in all areas of oncology; probes designed to interrogate cancer mechanisms, targeting pathways responsible for initiation or propagation of cancer cells, and studies describing the *in vivo* evaluation of existing or novel radiopharmaceuticals for oncology application.

5. **New Radiopharmaceuticals-Cardiovascular**
   Abstracts describing the development of novel radiopharmaceuticals for cardiovascular application; evaluation of existing or novel radiopharmaceuticals, and studying cardiac and vascular disorders using radiopharmaceuticals.

**Radiopharmacy:** Abstracts submitted to this category include those studies examining quality controls relating to cGMP; automation and optimization; procedures facilitating x-IND or RDRC studies.

**Dosimetry/Radiobiology:** Abstracts pertaining to radiopharmaceutical dosimetry and radiobiology should be submitted to this category.

**Radiopharmaceutical Sciences Council (RPSC) Young Investigator Award Symposium:** This SNM-sponsored symposium and competition, in association with the SNM Radiopharmaceutical Sciences Council, is reserved for the best scientific abstracts on radiopharmaceutical chemistry nuclear medicine submitted by young investigators. NOTE: Only abstracts submitted to, and accepted for, categories within the Radiopharmaceutical Chemistry track will be considered for the RPSC Young Investigator Award Symposium.

**General Clinical Specialties Track**

**Endocrinology:** Clinical investigations of endocrine diseases using diagnostic or therapeutic radiopharmaceuticals; pre-clinical in *vitro* or *in vivo* studies using animal models; thyroid cancer therapy.

**Gastroenterology:** Clinical investigations of hepatobiliary or gastrointestinal diseases; pre-clinical in *vitro* or *in vivo* studies using animal models.

**Infectious Disease/Hematology:** Clinical investigations of infectious diseases using radiopharmaceuticals; pre-clinical in *vitro* or *in vivo* studies using animal models.
Musculoskeletal: Clinical investigations of new methods for the clinical assessment of bone, joint and soft tissue pathology using established radiopharmaceuticals, new imaging agents or methods; preclinical in vitro or in vivo studies using animal models.

Pediatrics: All clinical and preclinical investigations involving the pediatric population should be submitted here rather than to other sections, e.g. renal, oncology, PET, cardiac, bone, etc.

Pulmonary: New methods for clinical assessment of lung function using radiopharmaceuticals; new imaging agents in clinical trials; effects of pathology, drug, environmental factors on function; preclinical in vitro or in vivo studies.

Renal/Electrolyte/Hypertension: New methods for clinical assessment of renal function using established and new radiopharmaceuticals; studies of the effects of pathology, environmental effectors, drug interactions, etc. on function and renovascular hypertension; preclinical in vitro or in vivo studies using animal models.

Operations/Practice Based/Outcomes Research: Operational and outcomes based clinical research topics designed to establish parameters and clinical relevance of general nuclear medicine techniques. This reflects the increased importance of evidence based research in clinical medical research and the central role technical development continues to play in general nuclear medicine. Included in the category are projects performing analysis either on the accuracy of new or established techniques or evaluations of the cost effectiveness of a technique. For example, projects might compare validity of differing imaging techniques, establish appropriateness criteria, or examine clinical guidelines proposed for imaging in diagnosis or therapy.

General Practice-Oncology: Topics involving the wide spectrum of established agents and approved techniques for oncology imaging and routine therapy. Applications include Iodine-131/Iodine-123 diagnostic scans for thyroid cancer, radiolabeled peptides (such as Indium-111 pentreotide) and antibodies (for example, Indium-111 capromab pendetide). In addition, most work involving F-18 FDG PET for routine or approved indications will fall under this category.

Oncology-Basic Track

Basic Science: Pre-clinical in vitro or in vivo (animal) studies of diagnostic or therapeutic radiopharmaceuticals should be submitted to this category. Also considered are non-clinical studies that use radiopharmaceuticals to elucidate the pathophysiology of malignancy; non-clinical studies that investigate radiopharmaceutical mechanisms of action in Oncology; and preliminary (Phase I) human studies of radiopharmaceuticals intended for applications in Oncology diagnosis or therapy.

Therapy, Metrics & Intervention (TMI) categories: Clinical investigations in human subjects, using established radiopharmaceuticals as Oncology therapeutic agents should be submitted to 1 of the 4 categories associated with TMI. Also considered for TMI categories are investigations which validate the clinical use of quantitative models in oncology; clinical investigations in human subjects, or pre-clinical studies in animal models, using radiopharmaceuticals as adjuncts to the performance of invasive procedures; other translational, multidisciplinary, or multimodality investigations combining Nuclear Medicine techniques with those of other disciplines as part of an integrated approach to oncology diagnosis or therapy. The 4 TMI categories available for selection during abstract submission:
- Radiopharmaceutical Therapy
- Image-Guided Therapy
- Technical Issues & Quantification
- Translational/Preclinical Nuclear Medicine

**Nuclear Oncology Young Investigator Award Symposium:** SNM-sponsored symposium and competition, in association with the SNM Nuclear Oncology Council, for the best scientific abstracts on Nuclear Oncology related topics in nuclear medicine, is designated as the SNM Nuclear Oncology Young Investigator Award. The objectives of this award session are to identify promising young investigators working in Nuclear Oncology related fields in nuclear medicine. To be considered, authors must check the “Nuclear Oncology Council Young Investigator Award Symposium” checkbox during abstract submission.

**Requirements and guidelines:**
- Applicants must be medical students, residents, fellows or graduate students, or be within 2 years of completing a Ph.D. or certified nuclear medicine training program (there is no age limit).
- No separate submission is necessary. The abstract must be original research, not previously published or presented.
- All applicants are encouraged to submit supporting data (references, table, and/or image), to allow a better evaluation of their work. Supporting data will not to be published.
- Applicants submitting more than one abstract, in contention for other SNM YI awards, may win only one award.
- All applicants must choose “Oral or Poster” presentation type; abstracts submitted as “Poster Only” or accepted as poster presentations will not be considered for this symposium.
- Seven (7) finalists (abstract presenters) will be included as part of the Nuclear Oncology Council Young Investigator Award Symposium session. The award winners will be notified AFTER giving their presentations (presentation performances will be rated) during the SNM Annual Meeting at the SNM Nuclear Oncology Council business meeting
  - Monetary prizes + certificate are awarded to the Presenting Author of the abstract

**Oncology-Clinical Diagnosis Track**

Clinical investigations using established radiopharmaceuticals in human subjects for the purpose(s) of diagnosis, initial staging, or restaging of solid tumors OR hematologic malignancy, or for the noninvasive monitoring of response to therapy. The Oncology-Clinical Diagnosis track houses 11 categories from which the submitting author can select:

- Breast
- Prostate/Genitourinary
- Lung
- GI – Colorectal and Liver
- GI – Noncolorectal
- Sarcoma/Melanoma
- Leukemia/Lymphoma/Myeloma
- Head & Neck
- Gynecological
- Neuroendocrine
- Other Tumors
Molecular Imaging: Non-radioactive/Multimodal Imaging & Clinical Trials Track (NEW NAME for 2010)

This track (formerly the “Multimodality & Non-radioactive Molecular Imaging” track) pertains to scientific investigations focusing on NON-RADIOACTIVE molecular imaging agents and techniques, as well as multi-modality investigations. The purpose of this track is to offer a venue for such investigations to be presented and discussed. Thus, abstracts that primarily involve the use of non-radioactive approaches to molecular imaging should be submitted to this track. NOTE: Investigations involving radiopharmaceuticals and techniques used to detect radiation should only submitted to this track if used in combination with NON-radioactive molecular imaging techniques and agents.

Descriptions for the three (3) categories + YIA symposium associated with this track are below.

Categories:
- Clinical Applications
- Non-radioactive Probe Development
- Clinical Trials
- MICoE Young Investigator Award Symposium (click “APPLY” button for consideration)

Clinical Applications: This category includes clinical investigations using non-radioactive imaging agents (e.g., contrast agents, nanoparticles, fluorescent dyes and proteins, microbubbles) or techniques (e.g., magnetic resonance, spectroscopy, ultrasound, multi-slice computed tomography, optical imaging of bioluminescence and fluorescence) to study normal physiology or pathophysiologic conditions. It encompasses the general medical specialties, e.g., cardiology and vascular medicine, neurosciences, oncology, endocrinology, gastroenterology, infectious disease/hematology, musculoskeletal, pediatrics, pulmonary, and nephrology. This track also includes investigations of radiopharmaceuticals, PET, or conventional instrumentation in combination with novel molecular imaging techniques and agents.

Non-radioactive Probe Development: This category includes the chemistry and pre-clinical in vitro and in vivo studies of non-radioactive (e.g., nanoparticles, fluorescent dyes and proteins, microbubbles) and multimodality imaging agents for the non-invasive imaging of disease. The development and study of non-radioactive activatable probes is also included. Aspects of the development of non-radioactive molecular imaging agents relevant to preparation for administration to humans (GMP manufacturing, quality control, cost-effective preparation, stability) are also included.

Clinical Trials: This category includes clinical trial investigations of the development and application of molecular imaging as a biomarker for drug development (e.g., target engagement, pharmacodynamic effect, therapeutic effect). This category includes studies of molecular imaging agents/probes, imaging studies, and quantitative analyses in Phase I, II, III, and IV clinical trials, focused specifically on issues related to drug development and outcomes (as opposed to studies focusing on the development of the imaging agent). Clinical trials evaluating non-radioactive molecularly targeted agents for therapy of diseases (e.g., photodynamic therapy) are also included.

Molecular Imaging Center of Excellence (MICoE) Young Investigator Award (YIA) Symposium: MICoE-sponsored symposium and competition for the best scientific abstracts on molecular imaging. The objective of this award session is to recognize promising young investigators working in the broad
field of molecular imaging. To be considered, authors must check the “MICoE Young Investigator Award Symposium” checkbox during abstract submission. IMPORTANT NOTE: Abstracts submitted to any track (not only the Non-radioactive/Multimodal Imaging & Clinical Trials track) can be considered for the MICoE YIA symposium. However, the author may select only one YIA symposium per abstract for which to be considered. For example, an abstract submitted to the Cardiovascular track can be considered for the MICoE YIA symposium (by checking the MICoE YIA symposium checkbox), but then would not be considered for the Cardiovascular YIA symposium.

Suggested Topics for Multimodality/Non-Radioactive Molecular Imaging & Clinical Trials Track

- Optical probes and imaging
- Bioluminescence and fluorescence imaging
- MR, CT & ultrasound contrast agents/imaging
- MR spectroscopy
- Nanoparticles
- Reporter genes
- Stem cell and tissue regeneration
- In vivo quantification methods
- Antibody targeting and imaging
- Antibody and small molecule therapies
- Receptor imaging
- Cellular imaging and trafficking
- Imaging DNA repair
- Hypoxia
- Apoptosis
- Novel oncologic agents
- Cardiovascular, neuroscience and oncological molecular imaging
Educational Exhibits are abstract submissions representing a review of any clinical or research topic. Although mainly designed for educators and physicians, Educational Exhibits are open to all submitting authors. All submissions must be checked off with “Poster Only” presentation preference. Unlike other submissions, these posters will not include new, original research, but will be educational in nature.

Educational exhibits should be designed to teach or review common nuclear medicine/PET findings, pathologic correlations, procedures, techniques, treatments, and interventions or other aspects related to the practice of nuclear medicine/PET. They can include a single or multi-modality approaches, and there is no definite number of cases/procedures to be included. Exhibits should encourage Annual Meeting attendees to learn about current ideas and practices in nuclear medicine/PET, and should encourage attendees to return numerous times during the meeting to study the exhibits. Clinically-oriented exhibits should be amply illustrated with images.

This program is designed mainly for Nuclear Medicine residents and other young professionals, Nuclear Medicine Program Directors, and Program Directors and Educators in Diagnostic Radiology and Radiation Oncology, but is open to submissions from all authors.

One of the six (6) subject categories, as listed below, must be selected when submitting an abstract as an Educational Exhibit:

- **Cardiovascular Sciences**: exhibits containing nuclear medicine topics related to basic and clinical sciences in cardiac or vascular disorders
- **Neurosciences**: exhibits containing nuclear medicine topics related to radiotracers (particularly for studying CNS), neurologic and psychiatric disorders with radiopharmaceuticals, and functional brain mapping
- **Radiopharmaceutical Sciences**: exhibits containing nuclear medicine topics related to radiopharmaceutical sciences, radiation dosimetry, and radiobiology
- **General Clinical Specialties**: exhibits containing nuclear medicine topics related to endocrinology, gastroenterology, infectious diseases, musculoskeletal disorders, pediatrics, pulmonary function, and renal function/renovascular hypertension
- **Oncology**: exhibits containing nuclear medicine topics related to basic science, clinical diagnosis, therapeutic radiopharmaceuticals, and hematological disorders in oncology
- **Correlative Imaging, including instrumentation, image fusion and data analysis**: exhibits containing nuclear medicine topics related to instrumentation, image generation, image fusion and data analysis
CATEGORY DESCRIPTIONS – Technologist Abstract Track

**Cardiovascular-Basic and Clinical**: Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established nuclear medicine procedures specific to the clinical assessment of the cardiovascular system.

**Cardiovascular-Cardiac PET**: Abstracts reporting investigations of PET camera, computer, and radiopharmaceutical developments; new methods for analysis and technical aspects of established PET procedures specific to the clinical assessment of the cardiovascular system.

**General Nuclear Medicine**: Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established nuclear medicine procedures specific to the clinical assessment and therapy. General specialties for the following can be placed in this category: bone/joint, endocrinology, gastroenterology, pediatrics, pulmonary and renal diseases.

**Inflammation & Infectious Disease**: Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established nuclear medicine procedures specific to the clinical assessment of hematological and infectious disease processes.

**Instrumentation & Data Analysis**: Abstracts reporting investigations of new developments, existing applications and performance and evaluation of nuclear medicine instrumentation and methods and programs available for data analysis not specific to SPECT or PET.

**Neurology-Basic and Clinical**: Abstracts reporting investigations of the technical aspects and/or new methods of analysis for the clinical assessment of CNS function or specific neuropsychiatric disorders using established or new radiopharmaceuticals.

**Neurology-PET**: Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established PET procedures specific to the clinical assessment of the central nervous system and neuropsychiatric disorders.

**Oncology-PET**: Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established PET procedures specific to the clinical assessment of oncology disease processes.

**Oncology-Therapy**: Abstracts reporting technical and clinical investigations of therapeutic oncology radiopharmaceuticals.

**Professional & Educational Practices**: Abstracts reporting the evaluation of managerial, educational and teaching practices, skill sets and professional competencies.

**Radiopharmaceuticals**: Abstracts reporting investigations of labeled compounds that have not been extensively reported and how they pertains to diagnostic and therapeutic nuclear medicine and PET procedures.

**Radiation Safety & Dosimetry/Radiation Biology**: Abstracts reporting investigations of radiation safety and/or radiation dosimetry and biology as it pertains to diagnostic and therapeutic nuclear medicine and PET procedures.
CATEGORY DESCRIPTIONS – Technologist Student Track

**Cardiology:** Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established nuclear medicine procedures specific to the clinical assessment of the cardiovascular system.

**General:** Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established nuclear medicine procedures specific to the clinical assessment and therapy. General specialties for the following can be placed in this category: bone/joint, endocrinology, gastroenterology, pediatrics, pulmonary and renal diseases.

**PET:** Abstracts reporting investigations of camera, computer, and radiopharmaceutical developments, new methods for analysis and technical aspects of established PET procedures specific to the clinical assessment and treatment of physical and mental disorders.

**Instrumentation:** Abstracts reporting investigations of new developments, existing applications and performance and evaluation of nuclear medicine instrumentation and methods and programs available for data analysis.

**Radiopharmacy:** Abstracts reporting investigations of labeled compounds that have not been extensively reported and how they pertains to diagnostic and therapeutic nuclear medicine and PET procedures.

**Radiation Safety & Patient Care:** Abstracts reporting investigations of radiation safety and/or radiation dosimetry/biology as it pertains to diagnostic and therapeutic nuclear medicine and PET procedures.