SNMMI 2014: Issues & Initiatives

SWC SNMMI March 2014

Gary L. Dillehay, MD, FACNM, FACR
SNMMI President
SNMMI in 2013-2014: Issues and Initiatives

• SNMMI Overview
• Strategic Plan
• Current Issues
• Clinical Trials Network
• New and Innovative SNMMI Tools
SNMMI in 2013-2014: Issues and Initiatives

• SNMMI Overview
## Membership Summary—2013

### Member Types

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technologists</td>
<td>11,047</td>
<td>(62%)</td>
</tr>
<tr>
<td>Full</td>
<td>5,265</td>
<td>(29%)</td>
</tr>
<tr>
<td>Emeritus/Honorary</td>
<td>1,241</td>
<td>(7%)</td>
</tr>
<tr>
<td>Associate</td>
<td>197</td>
<td>(1%)</td>
</tr>
<tr>
<td>Affiliate</td>
<td>113</td>
<td>(1%)</td>
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<tr>
<td>Lab Professionals</td>
<td>29</td>
<td>(0.01%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17,892</strong></td>
<td></td>
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</tbody>
</table>

All numbers current as of 7/31/2013.
Membership Summary—2013

All numbers current as of 7/31/2013.

Full Members by Designation

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>MD</td>
<td>2,357</td>
</tr>
<tr>
<td>Residents</td>
<td>1,470</td>
</tr>
<tr>
<td>PhD</td>
<td>676</td>
</tr>
<tr>
<td>MD/PhD</td>
<td>439</td>
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<tr>
<td>Other</td>
<td>324</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>5,266</strong></td>
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</tbody>
</table>
## Membership Summary—2013

### Resident and Student Members

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<tr>
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<th>Count</th>
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<tbody>
<tr>
<td>Tech Students</td>
<td>1,669</td>
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<tr>
<td>Residents</td>
<td>1,470</td>
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<tr>
<td>Associate Students</td>
<td>25</td>
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<td><strong>Total</strong></td>
<td>3,164</td>
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All numbers current as of 7/31/2013.
Membership Summary—2013

Members by Specialty Area*

<table>
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<tr>
<th>Description</th>
<th>Count</th>
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<tbody>
<tr>
<td>Nuclear Medicine (general)</td>
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<tr>
<td>Nuclear Medicine Technology</td>
<td>1,825</td>
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<tr>
<td>Cardiology</td>
<td>982</td>
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<tr>
<td>Radiology</td>
<td>841</td>
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<tr>
<td>Molecular Imaging</td>
<td>339</td>
</tr>
<tr>
<td>Medical Physics</td>
<td>239</td>
</tr>
<tr>
<td>Radiopharmaceutical Chemistry</td>
<td>63</td>
</tr>
<tr>
<td>Radiopharmacy</td>
<td>56</td>
</tr>
<tr>
<td>Hybrid Imaging</td>
<td>22</td>
</tr>
<tr>
<td>Molecular Probe/Contrast Agent Dev</td>
<td>14</td>
</tr>
<tr>
<td>Optical Imaging</td>
<td>7</td>
</tr>
</tbody>
</table>

Total 8,802

*Report includes members who reported demographics. This does not include all members.

All numbers current as of 7/31/2013.
SNMMI Leadership

Gary Dillehay, MD, FACNM, FACR
President

Peter Herscovitch, MD, FACP, FRCPC
President-Elect

Hossein Jadvar, MD, PhD, MPH, MBA, FACNM
Vice President-Elect

Scott Holbrook, BS, CNMT, FSNMMI-TS
SNMMI-TS President

April Mann, BA, CNMT, NCT, RT(N)
SNMMI-TS President-Elect
SNMMI in 2013-2014: Issues and Initiatives

- SNMMI Overview

- Strategic Plan
The “NEW” Strategic Plan

- Spring 2013—SNMMI board of directors and stakeholders met to set the society’s goals and priorities for the next 3–5 years.

- The group reviewed feedback from key groups (committees, councils, centers, House of Delegates, etc.)

- The new plan was created based on the top issues identified.

- The plan was approved in June 2013.

- Each “goal” relates directly to an “issue priority” for SNMMI.
Goal A: Advance the development and approval of nuclear medicine and molecular imaging technologies.

Goal B: Facilitate and support the availability and clinical utilization of nuclear medicine and molecular imaging technologies.

Goal C: Increase appropriate utilization of radionuclide therapy.

Goal D: Advance and promote quality, value and safety of molecular imaging and nuclear medicine.

Goal E: Support and enhance the professional workforce and environment.
Goal A - Advance the Development and Approval of Nuclear Medicine and Molecular Imaging Technologies

– Advocate for the improvement of the FDA process for evaluation and approval of new technologies.
  o FDA Task Force has developed a strategic plan.
  o Committee members have experience with FDA.
– Increase research funding, basic and translational.
Regulatory Hurdles for New & Existing Radiopharmaceuticals

• Issues with FDA
  – Evidentiary requirements for approval of new radiopharmaceuticals are too high.
  – PET manufacturing guidelines are cumbersome.
  – Inspections are finding non-adherence to applications for ANDAs and NDAs.
Goal A (cont.) - Advance the Development and Approval of Nuclear Medicine and Molecular Imaging Technologies

- Increase the translation of new technologies and agents.
  - Translational Molecular Imaging Symposium focusing on barriers, value proposition and key successes scheduled for Spring 2014.
  - Comprehensive educational program dedicated to preclinical investigations (workshops and global curriculum).

- Enhance educational resources for nuclear medicine and molecular imaging researchers.
  - New molecular imaging books (with Cambridge University)
  - Translational scientist curriculum

- Improve standardization for nuclear medicine and molecular imaging research
  - Clinical Trials Network
  - Quality Assurance Patient Simulator (Phantom) Program
Goal B - Facilitate and Support the Availability and Clinical Utilization of Nuclear Medicine & Molecular Imaging Technologies.

- Improve the integrity of the isotope supply chain and components.
  - Serious Mo-99 shortage possible in 2016.
  - Diversify world supply chain – high-level working group at OECD.
  - White House working group with FDA, CMS, NCI, DOE, NNSA and others.
  - Acceptance of the CMS $10 add-on payment for non-HEU Molybdenum is virtually non-existent.

- Demonstrate comparative effectiveness.

- Ensure adequate and appropriate reimbursement.
  - MIILWG Third-Party Payer Task Force
Goal B (cont.) - Facilitate and Support the Availability and Clinical Utilization of Nuclear Medicine & Molecular Imaging Technologies.

- Enhance outreach to referring physicians, patients and patient advocacy groups.
  - MIILWG General Nuclear Medicine Task Force
  - Audience-focused resources on new interactive website
  - Patient Advocate Hill Day—October 2013
  - Patient Education Day Program at SNMMI Annual Meeting
  - Referring physician-focused outreach
  - Roadshows for referring physicians
  - Free disease-specific webinars for CME

- Ensure appropriate use of nuclear medicine and molecular imaging technologies.
  - Appropriate use guidelines
  - Choosing Wisely
Choosing Wisely

- Campaign to help physicians and patients engage in conversations about the overuse of tests.

- Participating societies create a list of “Five Things Physicians and Patients Should Question.”
  - 50+ societies to date; 250+ recommendations

- Supported by partners such as Consumer Reports, AARP and Wikipedia.

- SNMMI’s participation allows us to educate referring physicians and patients.

- Announced on February 21, 2013.
Goal C - Increase Appropriate Utilization of Radionuclide Therapy

- Advocate for the regulatory approval and reimbursement of emerging agents.
- Advance the use of approved agents.
  - Radium-223 and radioimmunotherapy
  - NCI Workshop on Targeted Radionuclide Therapy (March 2013)
  - Roadshows on radionuclide therapy
  - Online education modules
  - Patient brochures on available therapies
  - TRT Webinar series for referring physicians (Part 1, offers free CME) and patients (Part 2)
- Assist in the development of emerging agents.
  - Determine how to expand the adoption of companion diagnostics.
NCI Workshop on Targeted Radionuclide Therapy

- Brought together oncologists, nuclear medicine physicians, radiation oncologists, physicists and basic scientists in several fields, as well as translational researchers, industry and regulatory groups.

- Identified issues:
  - There is a lack of availability of radioisotopes for research and clinical use.
  - More integration into and determination of optimal sequencing of TRT with existing standards of care might advance clinical use, as would better data on side effects/toxicity and complications compared with conventional therapies.
  - More attention to patient-reported outcomes assessing quality-of-life benefits with TRT is also needed.
Issues with Radionuclide Therapy

• Turf battles
  – Bexxar® withdrawn from market.

• Reimbursement issues
  – Increase metrics that demonstrate evidence.

• Label expansion for approved drugs
  – FDA requires very precise labeling, e.g., Xofigo is approved for the use for bone metastases in metastatic prostate cancer only.
Goal D - Advance and Promote Quality, Value and Safety of Molecular Imaging and Nuclear Medicine

- Increase the number of nuclear medicine quality measures for reporting.
  o Develop reporting guidelines for non-oncologic PET applications.
  o Reporting guidelines exist for PET/CT; consider working with EANM on reporting guidelines for other areas.
  o Develop quality measures.

- Increase the number of appropriate use criteria and evidence-based guidelines for molecular imaging and nuclear medicine.
  o Appropriate use criteria for brain amyloid imaging in Alzheimer's.

- Support comparative effectiveness research.
  o Compile cost-effectiveness data and generate evidence.
“Raising awareness is the primary goal of SNM, but it is a broad issue that cuts across a lot of different departments.” – SNM Staff member

Overarching Goal

“Enhance the Value of Molecular Imaging

“We need to bring awareness to the members; the evidence base impacts all of us and is necessary for the community.” – SNM Council/Committee member
• Process was not specific for the currently approved agent but included the class of amyloid imaging agents.

• Included evidence from the extensive [C-11]PIB literature.

• Less evidence related to clinical use in more general patient populations rather than selected research populations, effect on outcomes.

• Recommendations also be based on consensus expert opinion.

• Public comments were sought from AD and NM communities.
Issues with Perception of MI and NM

• Concern for Radiation Exposure
  – Working closely with NRC on rewrite of Part 35 (presenting October 18 at NRC).
  – Meeting with the FDA and the Hill about compounding
  – SNMMI participated in and promoted
    • Image Wisely
    • Image Gently
  – SNMMI released and publicized a position statement on dose optimization.
Goal D (cont.) - Advance and Promote Quality, Value and Safety of Molecular Imaging and Nuclear Medicine

- Enhance dissemination of information on dose optimization.
  - SNMMI Global Initiative - Harmonization of Pediatric Administered Activity Guidelines

- Increase opportunities and understanding of the utilization of general nuclear medicine.
  - Create message specific to key stakeholders (medical community, patients, referring physicians, etc.) on benefits of the appropriate use of nuclear medicine.

- Increase education for rating and reviewing AUC, evidence-based guidelines and CER.
  - Disseminate guidance on standardized approaches to research.
  - Conduct training and education programs.
SNMMI Dose Optimization Statement

“The Society of Nuclear Medicine and Molecular Imaging (SNMMI and the SNMMI-Technologist Section (SNMMI-TS) recognize that the use of low levels of radiation in these procedures entails some possible risk. Radiation dose for all nuclear medicine and molecular imaging procedures should be optimized so that the patient receives the smallest possible amount of radiopharmaceutical that will provide the appropriate diagnostic information. SNMMI and SNMMI-TS also recognize that if an appropriate procedure—one that can provide the physician with clinical information essential to the patient’s treatment—is not performed when necessary due to fear of radiation, it can be detrimental to the patient.

The SNMMI and SNMMI-TS believe that the right test with the right dose should be given to the right patient at the right time. When nuclear medicine and molecular imaging procedures are performed correctly on appropriate patients, the benefits of the procedure very far outweigh the potential risks. The procedure that provides the most useful clinical information is the one that should be performed.

To ensure the appropriate use of these procedures, all nuclear medicine facilities should have comprehensive quality control measures in place, their nuclear medicine physicians should have up-to-date training, and their technologists should be appropriately trained and certified. SNMMI and SNMMI-TS and their members continually strive to improve quality and standards to ensure patients receive the best, safest and most appropriate care.”

Approved by the SNMMI Board of Directors – June 7, 2012
SNMNI created a new Dose Optimization website that includes a wide range of useful resources.

Visit the site at:  
www.snmmi.org/dose

A new dose calculator is in development.

Further work is planned on reference levels; dosing survey results to be published.
Goal E - Support and Enhance the Professional Workforce and Environment

- Increase training and adherence to best practices in anatomical, molecular imaging and emerging technologies.
  - SNMMI Global Initiative—Harmonization of Pediatric Administered Activity Guidelines

- Educate others in the workplace about the value of nuclear medicine, molecular imaging, and therapy.
  - MIILWG General Nuclear Medicine Task Force
  - Sino-American Nuclear Medicine Conference —a collaborative, international symposium.
  - Wagner-Torizuka Fellowship—supports young fellows for study with a mentor in the U.S.
  - SNMMI online learning resources
  - Educational webinars—live online training sessions
  - Road shows and workshops as face-to-face educational experiences
Issues with the Professional Workforce

• Future of radiology/nuclear medicine residency training/education is uncertain.

• Radiologists and nuclear medicine professionals are interpreting molecular imaging studies, including hybrid imaging.

• Hybrid imaging poses challenges.
  – PET/MR
Goals for International Cooperation

Nuclear Medicine Global Initiative

• To encourage global collaboration in education; to harmonize procedure guidelines and other policies or to improve quality and safety

• Organizations involved:
  – Nuclear medicine societies of
    o China, Japan, Korea, India, Australia/New Zealand, Canada
  – Multinational organizations
    o European Association of Nuclear Medicine (EANM)
    o International Atomic Energy Agency (IAEA)
    o World Federation of Nuclear Medicine and Biology (WFNMB)
    o Association of Latin American Science in Biology and Nuclear Medicine (ALASBINM)
    o Pacific Oceanic Organization of Nuclear Medicine
Goal E (cont.) - Support and Enhance the Professional Workforce and Environment

- Increase interest of potential qualified individuals to pursue leadership in the SNMMI.
  - Future Leaders Academy (…coming in 2014)

- Develop and updated professional standards.
  - SNMMI/ACR Joint PET/MR Credentialing Task Force

- Educate consumers about the value of NM, MI and therapy.
  - Nuclear Medicine Week–October 6–12, 2014
  - Patient website
  - Patient-focused track at SNMMI Annual Meeting
Patient Website

Molecular Imaging: Healing begins with seeing precisely.

discoveryMI.org

Get The Facts
Molecular Imaging procedures that do not use radiation include magnetic resonance imaging, ultrasound and optical imaging.
READ MORE

Why Molecular Imaging Matters
Molecular imaging is a type of medical imaging that provides detailed pictures of what is happening inside the body at the molecular and cellular level that allows physicians to see how the body is functioning and to measure its chemical and biological processes. LEARN MORE
SNMMI Meetings—Recent Meetings

• Annual Meeting June 2013 in Vancouver

• 2nd Sino-American Conference
  – 2 U.S. and 2 Chinese residents participating in exchange program

• State-of-the-Art Molecular Imaging in Cancer Biology and Therapy
  – March 2013 in San Diego
  – Partnership with AACR

• NCI Workshop on Targeted Radionuclide Therapy

• Embracing Change within the Field—SNMMI-TS Roadshows (February–September 2013)
## SNMMI 2013 Annual Meeting Registration Type Count

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<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>1,990</td>
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<tr>
<td>Scientists</td>
<td>770</td>
</tr>
<tr>
<td>Industry</td>
<td>197</td>
</tr>
<tr>
<td>Technologists</td>
<td>742</td>
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<tr>
<td>Exhibitors</td>
<td>1890</td>
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<tr>
<td>Other</td>
<td>135</td>
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Total: 5,724
### Previous Annual Meeting Attendance

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<th></th>
<th>2011 San Antonio</th>
<th>2012 Miami Beach</th>
<th>2013 Vancouver</th>
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<tbody>
<tr>
<td>Physician</td>
<td>1,723</td>
<td>2,136</td>
<td>1,990</td>
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<tr>
<td>Scientist</td>
<td>774</td>
<td>907</td>
<td>770</td>
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<tr>
<td>Industry</td>
<td>240</td>
<td>195</td>
<td>197</td>
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<tr>
<td>Technologist</td>
<td>998</td>
<td>985</td>
<td>742</td>
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<tr>
<td>Exhibitors</td>
<td>1761</td>
<td>1974</td>
<td>1890</td>
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<tr>
<td>Other</td>
<td><strong>87</strong></td>
<td><strong>166</strong></td>
<td><strong>135</strong></td>
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<td>TOTAL</td>
<td>5,583</td>
<td>6,363</td>
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### 2013 Annual Meeting Primary Specialty

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<th>Description</th>
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<tbody>
<tr>
<td>Biochemistry</td>
<td>17</td>
<td>Neurology</td>
<td>34</td>
</tr>
<tr>
<td>Cardiology</td>
<td>68</td>
<td>Nuclear Medicine (general)</td>
<td>1531</td>
</tr>
<tr>
<td>Computer Science</td>
<td>19</td>
<td>Oncology</td>
<td>60</td>
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<tr>
<td>Dosimetry/Radiobiology</td>
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<td>Optical Imaging</td>
<td>3</td>
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<tr>
<td>Health Physics</td>
<td>7</td>
<td>Pediatrics</td>
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<tr>
<td>Hybrid Imaging</td>
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<td>Pharmacology</td>
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<td>Infectious Diseases</td>
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<td>Preclinical Research</td>
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<tr>
<td>Internal Medicine</td>
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<td>Radiation Therapy</td>
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<td>Instrumentation</td>
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<td>Radiochemistry</td>
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<td>Medical Devices</td>
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<td>Radioimmunoassay</td>
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<td>Medical Physics</td>
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<td>Radiology</td>
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<tr>
<td>Molecular Imaging</td>
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<td>Radionuclide Therapy</td>
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<tr>
<td>Molecular Probe and Contrast Agent Development</td>
<td>35</td>
<td>Radiopharmacy</td>
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<tr>
<td>Nanomedicine</td>
<td>5</td>
<td>Other</td>
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<td>No Answer</td>
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The 2013 Annual Meeting had a total of 5,724 attendees representing 69 countries; 38% of attendees were from outside the U.S.
SNMMI Meetings—Future Meetings

- Mid-Winter Meeting / February 6–9, 2014 / Palm Springs, CA
- Annual Meeting / June 7–11, 2014 / St. Louis, MO
- ASNC on the Road (SNMMI is a Co-Sponsor)
- Joint sessions at RSNA, ASTRO, ASCO, WMIC
- Translation of Molecular Imaging Workshop
- Molecular Imaging in Cardiovascular Workshop
SNMMI Journals

- **The Journal of Nuclear Medicine**
  - Highest-impact nuclear medicine journal in the world
  - Editors and editorial board include many of the most widely respected nuclear medicine and molecular imaging professionals in the world
  - >21,165 citations per year
  - >1,265 submissions a year, 75% of which are international

- **Journal of Nuclear Medicine Technology**
  - Focuses entirely on the technology crucial to nuclear medicine
  - More than 40 peer-reviewed articles per year, including case studies

- **SNMMI also sponsors the journal Molecular Imaging**
  - Published by Decker Publishing Inc.
SNMMI in 2013-2014: Issues and Initiatives

- SNMMI today
- Strategic plan
- Current issues
- Clinical Trials Network
• Mission
  – Advance the use of molecular imaging biomarkers in clinical trials through standardization of chemistry and imaging methodology. This includes using imaging biomarkers during the course of drug development, as well as bringing new radiopharmaceuticals to regulatory approval.
SNMMI Clinical Trials Network (CTN)

• Goals

  – Ensure high-quality PET and SPECT imaging in the conduct of drug development clinical trials
    o Scanner validation
      • Oncology and neurology (brain) phantoms

  – Work toward use and approval of new radiopharmaceuticals
    o Facilitating an investigator-owned IND trial of $^{68}$Ga-labeled DOTA agents
SNMMI Clinical Trials Network (CTN)

• Goals (continued)

  – Facilitate access to investigational PET radiopharmaceuticals for multicenter clinical trials
    o Centralized IND for $^{18}$F-FLT
    o Database of all U.S. manufacturing sites and products

  – Provide education and training for the use of molecular imaging in clinical research
    o Curriculum for basic and advanced research
CTN Database of RP Manufacturers

Worldwide FLT production. Blue = producers only. Red is imaging & production sites (i.e., universities).
SNMMI in 2013: Issues and Initiatives

- SNMMI today
- Strategic plan
- Current issues
- Clinical Trials Network
- New and innovative SNMMI tools
SNMMI New Website

- Introduce a responsive layout
SNMMI New Website

- Filter content by audience
  - Physicians
  - Technologists
  - Scientists
  - Young professionals
  - Technologist students
  - Press and media
New Apps for 2013

• *Meeting App*

Main Features
• Itinerary building
• Cross-device itinerary sync
• Note taking
• Featured exhibitors
• Integrated social media
• Ad management
• Data integration
**Premium Features**

- Articles optimized for mobile format
- Increase/decrease font for easy reading
- Full search within issues/articles
- Mark and store articles offline
- Save articles to favorites
- Sharing feature
- Advertisement banner
The goal of the infographic is to provide referring physicians and patients an easy-to-understand explanation of when amyloid brain imaging is appropriate.

The infographic was originally created to be posted on the web and shared with our social media networks.
Thank You!

Questions?