

# Nuclear Medicine UPDATE 2017

17 - 19 August 2017  
Singapore

theme:

**Nuclear Medicine in the  
Era of Precision Medicine**



## DAY 1: THURSDAY, 17 AUGUST 2017

0800 – 0830	<b>REGISTRATION</b> (Coleman Room Foyer, Level 4)
0830 – 0840	<b>INAUGURATION</b> (Jubilee Ballroom, Level 4)
0830 – 0835	<b>Welcome Address</b> Dr David Ng, President, Nuclear Medicine Society (Singapore)
0835 – 0840	<b>Opening Address</b>
0840 – 1015	<b>SCIENTIFIC SESSION 1: NUCLEAR MEDICINE IN WORLD SCOPE</b> (Jubilee Ballroom, Level 4)
0840 – 0900	<b>Nuclear Medicine and Global Initiative in Radiopharmaceuticals</b> Prof Andrew Scott, Molecular Imaging and Therapy, Austin Health, Melbourne, Australia <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the issues impacting on radiopharmaceutical access in developed and developing countries.</li> <li>2. Explain the new technologies impacting on radiopharmaceutical use in nuclear medicine practice.</li> <li>3. Integrate the evidence required for new radiopharmaceuticals approval with available datasets.</li> </ol>
0905 – 0925	<b>Education and Training of Nuclear Medicine Professionals in Asia</b> Prof Henry Bom, Nuclear Medicine, CNU Medical School, Korea <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Attendees will learn the current situation and prospects of education and training for nuclear medicine professionals in Asia.</li> <li>2. Attendees will learn the basic curriculum of nuclear medicine physician training.</li> <li>3. Attendees will learn the needs for the education of referring physicians.</li> </ol>
0930 – 0950	<b>New Clinical Trial Designs for Precision Medicine: The US NCI-MATCH Trial</b> Prof Terence Z Wong, Nuclear Medicine, Lineberger Comprehensive Cancer Center, University of North Carolina School of Medicine, USA <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the development of clinical trial design for targeted therapeutic agents.</li> <li>2. Update the current status of the US NCI-MATCH trial.</li> <li>3. Explain the current and potential future roles of imaging in targeted therapy trials.</li> </ol>
0955 – 1015	<b>Role of the IAEA in Promoting Nuclear Medicine Worldwide</b> Mr Thomas Pascual, Nuclear Sciences and Applications, International Atomic Energy Agency, Austria <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the role of IAEA in world nuclear medicine.</li> <li>2. Outline the future plan of collaboration of IAEA and member states.</li> </ol>
1020 – 1040	<b>Coffee &amp; Tea Break / Trade Exhibition / Poster Viewing</b> (Coleman Room, Level 4)
1040 – 1215	<b>SCIENTIFIC SESSION 2: IMMUNOTHERAPY AND RESPONSE ASSESSMENT</b> (Jubilee Ballroom, Level 4)
1040 – 1100	<b>Evolving Treatment Response Criteria in Oncology</b> Dr Hossein Jadvar, Radiology, University of Southern California, USA <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the role of imaging in assessment of response to cancer treatment.</li> <li>2. Explain the shortcomings of anatomic based treatment response criteria.</li> <li>3. Integrate the concept of metabolic criteria into framework of treatment response assessment.</li> </ol>
1105 – 1125	<b>Molecular Imaging of the Tumour Microenvironment</b> Prof Andrew Scott, Molecular Imaging and Therapy, Austin Health, Melbourne, Australia <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the concept of targeting the tumour microenvironment in cancer models and patient.</li> <li>2. Explain the advantages/disadvantages of targets and techniques in identifying microenvironment contribution to tumour growth.</li> <li>3. Integrate the concept of imaging the tumour microenvironment with new therapies in cancer patients.</li> </ol>
1130 – 1150	<b>PET/CT monitoring of Response to Immunotherapy</b> A/Prof Michael Hofman, Centre for Cancer Imaging, Peter MacCallum Cancer Centre, Australia <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the concept of immunotherapy for treatment of malignancies, with a particular focus of metastatic melanoma.</li> <li>2. Explain the appearances of immune-related adverse effects that may be visualised on FDG PET.</li> <li>3. Integrate how to assess response to immunotherapy in the clinical practice of Nuclear Medicine.</li> </ol>
1155 – 1215	<b>Imaging as a Biomarker for Targeted and Immunotherapy</b> Prof Terence Z Wong, Nuclear Medicine, Lineberger Comprehensive Cancer Center, University of North Carolina School of Medicine, USA <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the applications of imaging as a biomarker in the context of targeted therapy.</li> <li>2. Explain the evaluation criteria of biomarkers.</li> <li>3. Define prognostic, pharmacodynamic, predictive, integrated, and integral biomarkers.</li> </ol>
1215 – 1245	<b>Lunch / Trade Exhibition / Poster Viewing</b> (Coleman Room, Level 4)
1245 – 1345	<b>LUNCH SYMPOSIUM (SPONSORED BY GE HEALTHCARE PTE LTD)</b> (Jubilee Ballroom, Level 4)
1345 – 1445	<b>SCIENTIFIC SESSION 3: CHINA PRESENTS</b> (Jubilee Ballroom, Level 4)
1345 – 1405	<b>Current Status of Nuclear Medicine in China</b> Prof Li Yaming, President/CSNMMI, China
1405 – 1425	<b>Clinical Translation of Radionuclide Molecular Imaging &amp; Translational Research Pattern in PUMCH</b> Prof Li Fang, Director/Nuclear Medicine, Peking Union Medical College Hospital, China
1425 – 1445	<b><sup>18</sup>F-DOPA clinical applications and single center experience</b> Prof Wang Feng, Director/Nuclear Medicine, Nanjing Hospital, China <i>Objectives</i> <ol style="list-style-type: none"> <li>1. To evaluate the clinical role of <sup>18</sup>F-dopa PET/CT for the detection of Neuroendocrine tumors and compared with <sup>68</sup>Ga-SSA PET/CT. Especially, <sup>18</sup>F-dopa PET/CT for the diagnosis of pNET was addressed.</li> </ol>

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1450 – 1545	<b>ORAL PRESENTATION SESSION 1: CHINA PRESENTS</b> (Jubilee Ballroom, Level 4)
1545 – 1605	<b>Coffee &amp; Tea Break / Trade Exhibition / Poster Viewing</b> (Coleman Room, Level 4)
1605 – 1705	<b>SCIENTIFIC SESSION 4: NUCLEAR NEUROLOGY</b> (Jubilee Ballroom, Level 4)
1605 – 1625	<b>Update on Tau Imaging Tracers</b> Dr Daniel L. Yokell, Gordon Center for Medical Imaging, Massachusetts General Hospital/Harvard Medical School, USA
1625 – 1645	<b>Dementia Imaging Update and Local Experience</b> Dr Andrew Tan, Radiology, Raffles Medical Group, Singapore <i>Objectives</i> 1. <i>Sharing of experiences in starting dementia imaging services and sample cases.</i>
1645 – 1705	<b>How DaTSCAN can Change Clinical Practice and an Update on Our Local Experience</b> Dr Xie Wanying, Nuclear Medicine & PET, Singapore General Hospital, Singapore <i>Objectives</i> 1. <i>Review the concept of dopaminergic neurotransmission in Parkinsonism and other movement disorders.</i> 2. <i>Explain the advantages and limitations of DaTSCAN in the diagnosis of Parkinson's disease.</i> 3. <i>Integrate DaTSCAN imaging in the diagnostic pathway for Parkinsonism.</i>
1705 – 1830	<b>ORAL PRESENTATION SESSION 2</b> (Jubilee Ballroom, Level 4)
1830	<b>End of Day 1</b>

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0800 – 0830	<b>REGISTRATION</b> (Coleman Room Foyer, Level 4)
0830 – 0940	<b>SCIENTIFIC SESSION 5: NEUROENDOCRINE TUMOR PRRT</b> (Jubilee Ballroom, Level 4)
0830 – 0850	<b>PRRT Current Status and Directions</b> A/Prof Paul Roach, Nuclear Medicine, Royal North Shore Hospital, Australia <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the concept of PRRT in the management of patients with neuroendocrine tumours (NETs).</li> <li>2. Explain the role of Ga68 dotatate and other tracers such as F18 FDG in appropriately selecting PRRT in patients with NETs.</li> <li>3. Integrate the concept of functional imaging in the clinical practice of Nuclear Medicine for patients undergoing PRRT.</li> </ol>
0855 – 0915	<b>PRRT Dosimetry</b> A/Prof Michael Hofman, Centre for Cancer Imaging, Peter MacCallum Cancer Centre, Australia <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the methods to assess dosimetry following administration of Lu-177 or Y-90 based peptide therapies.</li> <li>2. Explain uses of dosimetry in research and in guiding clinical practice.</li> <li>3. Integrate how to utilise dosimetry in routine clinical practice of Theranostics.</li> </ol>
0920 – 0940	<b>PRRT Chemoradiotherapy</b> A/Prof Michael Hofman, Centre for Cancer Imaging, Peter MacCallum Cancer Centre, Australia <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the range of radiosensitisers available for combining with peptide receptor radionuclide therapy (PRRT).</li> <li>2. Explain advantages and disadvantages of adding radiosensitisers to PRRT.</li> </ol>
0945 – 1020	<b>ORAL PRESENTATION SESSION 3</b> (Jubilee Ballroom, Level 4)
1020 – 1040	<b>Coffee &amp; Tea Break / Trade Exhibition / Poster Viewing</b> (Coleman Room, Level 4)
1040 – 1210	<b>SCIENTIFIC SESSION 6: PROSTATE CANCER</b> (Jubilee Ballroom, Level 4)
1040 – 1100	<b>Molecular Imaging of Prostate Cancer</b> Dr Hossein Jadvar, Radiology, University of Southern California, USA <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the natural history of prostate cancer.</li> <li>2. Highlight the potential role of PET in the imaging evaluation of prostate cancer.</li> <li>3. Summarize the role of radiotheranostics in prostate cancer.</li> </ol>
1105 – 1145	<b>Overview on 68Ga-PSMA-Targeted Diagnosis and Therapy</b> Prof Irene Virgolini, Univ.-Klinik für Nuklearmedizin, Medical University Innsbruck, Austria <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Current status of PET/CT imaging in primary prostate cancer (primary staging).</li> <li>2. Current status of PET/CT imaging in recurrent prostate cancer (secondary staging).</li> <li>3. Current status of PSMA-directed radioligand therapy in prostate cancer (PRLT).</li> <li>4. Future of PRLT.</li> </ol>
1150 – 1210	<b>Use of PSMA-targeting Theranostics in Metastatic Prostate Cancer: Current Status</b> A/Prof Shuren Li, Biomedical Imaging and Image-guided Therapy, Medical University of Vienna, Austria <i>Objectives</i> <ol style="list-style-type: none"> <li>1. To illustrate the development history of PSMA-targeting Theranostics and their advantages in management of prostate cancer.</li> <li>2. To become familiar with the clinical impact of PET/CT (and PET/MRI) using PSMA-targeting Diagnostics.</li> <li>3. To learn about the potentials of PSMA-targeting Theranostics for the treatment of prostate cancer recurrence and metastases.</li> </ol>
1215 – 1315	<b>Lunch Symposium / Trade Exhibition / Poster Viewing</b> (Coleman Room, Level 4)
1315 – 1450	<b>SCIENTIFIC SESSION 7: MIBG AND OTHER THERAPIES</b> (Jubilee Ballroom, Level 4)
1315 – 1335	<b>Making Old New Again: Approaches to Optimize MIBG Therapy in Neuroendocrine Cancers</b> Dr Eftychia Koumariou, Laboratory for Translational and Molecular Imaging (LTMI), Duke-NUS Medical School, Singapore <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the concept of MIBG therapy optimization in the management of neuroendocrine cancers.</li> <li>2. Explain the advantages of increasing the membrane expression of the Norepinephrine Transporter (NET) in neuroendocrine cancers by pharmacological interventions to increase MIBG intracellular concentrations and thus enhance its therapeutic efficacy.</li> <li>3. Integrate the concept of imaging with "priming" of tumour cells for optimized therapeutic effect of MIBG in the clinical practice of Nuclear Medicine.</li> </ol>
1340 – 1400	<b>MIBG Clinical Approach and Updates</b> Dr Kelvin Loke, Nuclear Medicine & PET, Singapore General Hospital, Singapore
1405 – 1425	<b>Boron Neutron Capture Therapy of Malignant Tumour</b> Prof Jun Hatazawa, Nuclear Medicine and Tracer Kinetics, Osaka University, Graduate School of Medicine, Japan <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Review the concept of boron neutron capture therapy in the management of glioblastoma and other intractable tumours.</li> <li>2. Explain the advantages of boron neutron capture therapy in management of glioblastoma is high specificity of cell killing effect to cancer cells. The disadvantage is set-up of in-hospital cyclotron.</li> <li>3. Integrate the concept of molecular imaging and neutron therapy in the clinical practice of Nuclear Medicine.</li> </ol>
1430 – 1450	<b>Update of Radioactive Iodine Therapy for Differentiated Thyroid Cancer</b> Prof Henry Bom, Nuclear Medicine, CNU Medical School, Korea <i>Objectives</i> <ol style="list-style-type: none"> <li>1. Attendees will learn the changing guidelines of radioactive iodine therapy for differentiated thyroid cancer (RAIT_DTC).</li> <li>2. Attendees will learn the current practice of RAIT_DTC in Asia.</li> <li>3. Attendees will learn the therapeutic options for radioactive iodine refractory thyroid cancer.</li> </ol>
1455 – 1515	<b>Coffee &amp; Tea Break / Trade Exhibition / Poster Viewing</b> (Coleman Room, Level 4)

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1515 – 1600	<b>SCIENTIFIC SESSION 8: RADIOPHARMACY</b> (Jubilee Ballroom, Level 4)
1515 – 1535	<b>Synthesis of the F-18 Tau PET agents</b> Dr Daniel L. Yokell, Gordon Center for Medical Imaging, Massachusetts General Hospital/Harvard Medical School, USA
1540 – 1600	<b>Tips, Tricks and Traps of Running a Radiopharmacy</b> Dr Sidney Yu, Nuclear Medicine & PET, Singapore General Hospital, Singapore
1605 – 1730	<b>ORAL PRESENTATION SESSION 4</b> (Jubilee Ballroom, Level 4)
1730 – 2200	<b>NUCLEAR MEDICINE SOCIETY (SINGAPORE) ANNUAL ORATION &amp; CONFERENCE DINNER</b> (Jubilee Ballroom, Level 4)
1730 – 1830	<b>Imaging in the Age of Precision Medicine: Some Alternative Facts</b> Prof David Townsend, A*STAR-NUS Clinical Imaging Research Centre (CIRC), National University of Singapore, Singapore
1830 – 1900	<b>Awards Ceremony</b>
1900 – 2200	<b>Cocktail &amp; Conference Dinner</b>
2200	<b>End of Day 2</b>

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## DAY 3: SATURDAY, 19 AUGUST 2017

0800 – 0830	<b>REGISTRATION</b> (Coleman Room Foyer, Level 4)
0830 – 1005	<b>SCIENTIFIC SESSION 9: CLINICAL PET/CT</b> (Jubilee Ballroom, Level 4)
0830 – 0850	<b>PET in Genitourinary Carcinoma</b> A/Prof Sze-Ting Lee, Molecular Imaging & Therapy, Austin Health, Australia
0855 – 0915	<b>Hypoxia PET/CT Imaging in Lung Cancer</b> Prof Tim Van den Wyngaert, Antwerp University Hospital, Belgium <i>Objectives</i> <ol style="list-style-type: none"><li>1. Review the concept of hypoxia as a major hallmark of cancer and the potential role of hypoxia imaging in the management of lung cancer.</li><li>2. Explain the advantages/disadvantages of PET hypoxia imaging probes and recent developments in improving imaging characteristics in (pre)clinical lung cancer models.</li><li>3. Integrate the concept of imaging biomarkers and optimal treatment selection in the clinical practice of Nuclear Medicine.</li></ol>
0920 – 0940	<b><sup>18</sup>F-NaF Bone Imaging</b> Dr Fahad Marafi, President/Kuwait Nuclear Medicine Society, Kuwait <i>Objectives</i> <ol style="list-style-type: none"><li>1. Review the concept of F-18 Sodium Fluoride (NAF) PET/CT in the management of benign and malignant disease.</li><li>2. Explain the advantages/disadvantages of F-18 NAF PET/CT versus conventional bone scintigraphy in management of benign and malignant disease.</li><li>3. Integrate the concept of New PET/CT radiopharmaceuticals and Imaging Techniques in the clinical practice of Nuclear Medicine.</li></ol>
0945 – 1005	<b>PET in Gynecological Carcinoma</b> A/Prof Sze-Ting Lee, Molecular Imaging & Therapy, Austin Health, Australia
1010 – 1030	<b>Coffee &amp; Tea Break / Trade Exhibition</b> (Coleman Room, Level 4)
1030 – 1205	<b>SCIENTIFIC SESSION 10: OTHER IMAGINGS</b> (Jubilee Ballroom, Level 4)
1030 – 1050	<b>MRI: Clinical Pearls for Nuclear Medicine</b> A/Prof James Khoo, Oncologic Imaging, National Cancer Centre Singapore, Singapore <i>Objectives</i> <ol style="list-style-type: none"><li>1. Understanding the common MRI sequences.</li><li>2. Recognizing the common MRI artifacts.</li><li>3. MRI applications in Oncology.</li></ol>
1055 – 1115	<b>SPECT Myocardial Blood Flow Quantitation</b> A/Prof Felix Keng, Nuclear Cardiology, National Heart Centre, Singapore
1120 – 1140	<b>SPECT-CT in Orthopaedics</b> Prof Tim Van den Wyngaert, Antwerp University Hospital, Belgium <i>Objectives</i> <ol style="list-style-type: none"><li>1. Review the concept of radionuclide SPECT/CT bone imaging in the management of common orthopaedic conditions.</li><li>2. Explain the advantages/disadvantages of hybrid bone SPECT/CT imaging, in particular in the management of recurrent symptoms after orthopaedic joint replacement or fusion surgery.</li><li>3. Integrate the concept of hybrid bone SPECT/CT imaging as problem solving tool in the clinical practice of Nuclear Medicine.</li></ol>
1145 – 1205	<b>F-18 Fluoro-borono-phenylalanine PET/CT</b> Prof Jun Hatazawa, Nuclear Medicine and Tracer Kinetics, Osaka University, Graduate School of Medicine, Japan <i>Objectives</i> <ol style="list-style-type: none"><li>1. Review the concept of fluoro-borono-phenylalanine PET in the management of cancer patients.</li><li>2. Explain the advantages of FBPA PET in management of cancer patients is high cancer specific diagnosis beyond FDG PET, and disadvantage is low production by FBPA.</li><li>3. Integrate FBPA PET derived anti-cancer drug development.</li></ol>
1210 – 1215	<b>CLOSING ADDRESS</b> (Jubilee Ballroom, Level 4)
1210 – 1215	<b>Closing Remarks</b> Dr Sean Yan, Organizing Co-Chair, Nuclear Medicine Update 2017
1215	<b>End of Day 3</b>