

Dr Aravind S Ravi Kumar

MBBS FRACP FAANMS

PROFESSIONAL APPOINTMENTS

- **Staff Specialist Nuclear Medicine Physician**

1/2016-present: Department of Cancer Imaging. Peter MacCallum Cancer Centre (PMCC), Victoria.

- **Clinical Senior Fellow**

11/2018-present: The Sir Peter MacCallum Dept of Oncology. The University of Melbourne, Victoria.

- **Staff Specialist Nuclear Medicine Physician (Deputy Director mid-2014-2016)**

1/2004-1/2016: Department of Nuclear Medicine and Specialised PET Services Queensland, Royal Brisbane and Women's Hospital (RBWH) Queensland.

- **Senior Lecturer**

2004-2016: School of Medicine, University of Queensland

TERTIARY EDUCATION

2003: FRACP (Nuclear Medicine)
Royal Australasian College of Physicians

1995: MBBS University of Sydney

MAJOR COMMITTEE MEMBERSHIPS

2013-2017: Chair, Joint Specialist Advisory Committee (JSAC) in Nuclear Medicine, RACP and RANZCR (now renamed the Committee for Joint College Training in Nuclear Medicine)

2015-2018: OTP Committee, RACP / JCT Nuclear Medicine

2013-2017: Advanced Training Forum, RACP

2011-2012: Coordinator of advanced training, JSAC in Nuclear Medicine, RACP

2008-2017: Education committee of the AANMS / ANZAPNM (lead role in registrar oral assessment task 2008-2015 and overall CAP coordinator 2011-2016)

2008-2012: Council of the ANZAPNM (Qld representative)

MAJOR ACHIEVEMENTS IN EDUCATION / TEACHING

- Director of Training, PMCC, 2017-2020.
- Chair of Joint Specialist Advisory Committee (JSAC) in Nuclear Medicine, RACP, 2013-17, and Coordinator of advanced training 2011-2012
- Member of the ANZAPNM Education Committee, 2008-2017
- Coordinator of the Australia-wide registrar Continuing Assessment Programme (CAP), 2011-2016 including Australia-wide coordinator (2008-2011) and Qld state co-ordinator (2007-2015) of the registrar oral assessment task, and examiner every year since 2007.
- RACP Accredited supervisor of advanced trainees in Nuclear Medicine (two to three trainees per year at RBWH) from 2005 to 2011, and at PMCC (2017-2020).

MAJOR INVITED PRESENTATIONS

- "Sequencing and combination therapies in metastatic prostate cancer : Current Literature and future trials" Plenary session, SNM India, Mumbai, Dec 12-15 2019.
- "PSMA Ligands – Imaging and Therapy" CME session, SNM India, Mumbai, December 12-15 2019.
- "PSMA - the Big Bang" Panel discussion on PSMA in diagnosis and therapy, CME session, SNM India, Mumbai, Dec 12-15 2019.
- "Lu-PSMA therapy" CME Session at the SNMMI Annual Meeting, Anaheim USA June 22-25, 2019.

- “Molecular Imaging: Diagnostic.” 5th Conference of the Asia Pacific Neuroendocrine Tumour Society, Mumbai, India 27-29 October 2017.
- “Imaging beyond DOTA.” 5th Conference of the Asia Pacific Neuroendocrine Tumour Society, Mumbai, India 27-29 October 2017.
- Debate: “PRRT vs medical therapy in metastatic NET.” 5th Conference of the Asia Pacific Neuroendocrine Tumour Society, Mumbai, India 27-29 October 2017.
- “Thyroid Cancer – Nuclear Medicine Perspective.” Current Concepts in Head and Neck Cancer Care: A Multidisciplinary Management Approach. Melbourne, Australia. 29 April 2017.
- “PET in Radiotherapy planning – The Queensland Experience.” i*FIT Workshop, Sydney Australia 2010.
- “Future directions for PET in lung cancer.” The 2nd Australian Lung Cancer Conference (ALCC), Gold Coast, Australia 2008.
- “Clinical case challenge.” The 38th Annual meeting of the Australia and New Zealand Society of Nuclear Medicine (ANZSNM), Gold Coast, Australia 2008.

CLINICAL RESEARCH

Clinical trials investigator (active)

1. UpFrontPSMA trial: A Randomised Phase 2 Study of Sequential 177Lu-PSMA617 and Docetaxel versus Docetaxel in Metastatic Hormone-Naive Prostate Cancer
2. ENZA trial: A randomised phase II trial using PSMA as a therapeutic agent and prognostic indicator in men with metastatic castrate-resistant prostate cancer treated with enzalutamide
3. PRINCE trial: Phase Ib/II Study of Radionuclide 177Lutetium-PSMA-617 Therapy in Combination with Pembrolizumab for Treatment of Metastatic Castration Resistant Prostate
4. LuPARP trial: Phase 1 trial of 177Lu-PSMA-617 therapy and Olaparib in patients with Metastatic Castration Resistant Prostate Cancer
5. An international multi-center, open-label study to evaluate safety, tolerability, biodistribution, dosimetry and preliminary efficacy of 177Lu-OPS201 for the therapy of somatostatin receptor-positive neuroendocrine tumors (NETs)
6. COMPETE: A prospective, randomised, Controlled, Open-label, Multicentre phase III study to evaluate efficacy and safety of Peptide Receptor Radionuclide Therapy (PRRT) with 177Lu-Edotreotide compared to targeted molecular therapy with Everolimus in patients with inoperable, progressive, somato-statin receptor-positive (SSTR+), neuroendocrine tumours of gastroenteric or pancreatic origin (GEP-NET).

Clinical trials investigator (closed)

7. TheraP: A randomised phase 2 trial of 177Lu-PSMA617 theranostic versus cabazitaxel in progressive metastatic castration resistant prostate cancer
8. Radionuclide therapy using 177Lu-PSMA: a pilot study in men with castrate-resistant prostate cancer (LuPSMA trial)
9. ProPSMA: A prospective randomised multi-centre study of the impact of Ga-68 PSMA-PET/CT imaging for staging high risk prostate cancer prior to curative-intent surgery or radiotherapy
10. ERA-223: A Phase III Randomized, Double-blind, Placebo-controlled Trial of Radium-223 Dichloride in Combination With Abiraterone Acetate and Prednisone/Prednisolone in the Treatment of Asymptomatic or Mildly Symptomatic Chemotherapy-naïve Subjects With Bone Predominant Metastatic Castration-resistant Prostate Cancer (CRPC)
11. ALSYMPCA trial, Randomized Phase III Trial of Radium-223 vs placebo in bone predominant metastatic prostate cancer.
12. SIRFLOX trial, Randomized Phase III Trial Comparing First-Line mFOLFOX6 (Plus or Minus Bevacizumab) Versus mFOLFOX6 (Plus or Minus Bevacizumab) Plus Selective Internal Radiation Therapy in Patients With Metastatic Colorectal Cancer
13. SNAC trial. Sentinel lymph node biopsy versus axillary clearance in operable breast cancer.

14. CONTROL NETS: A parallel group randomised, controlled, multi-centre phase II open label trial to evaluate progression free survival in Cohort A: Pancreatic NETs - peptide receptor radionuclide therapy (PRRT)/capecitabine + temozolomide (CAPTEM) vs. CAPTEM (control) and Cohort B: Midgut NETs - PRRT/CAPTEM vs. PRRT (control).

PEER REVIEWED PUBLICATIONS

1. Dhiantravan N, Hofman M, Ravi Kumar A. Actinium-225 Prostate-specific Membrane Antigen Theranostics: Will alpha Beat beta? *Eur Urol* <https://doi.org/10.1016/j.eururo.2020.12.011>
2. Dhiantravan N, Ravi Kumar AS, Kavanagh K, McDowell L. A role of PSMA PET/CT in multimodality imaging approach in adenoid cystic carcinoma. *J Med Imaging Radiat Oncol*. <http://dx.doi.org/10.1111/1754-9485.13116>
3. Ravi Kumar AS, Lawrentschuk N, Hofman MS. PSMA PET/CT for staging prostate cancer. *Curr Opin Urol* 2020, 30:628–634
4. Ravi Kumar AS, Hofman MS. Mechanistic insights for optimising PSMA radioligand therapy. *Clin Cancer Res*. 2020;6(12):2774–2776.
5. Ferdinandus J, Violet J...Ravi Kumar AS...Hofman M. Prognostic biomarkers in men with metastatic castration-resistant prostate cancer receiving Lutetium-177-PSMA-617. *Eur J Nucl Med Mol Imaging*. 2020;47(10):2322-2327.
6. Lee JC, Hartnett G, Ravi Kumar AS. The added benefit of contrast-enhanced CT in evaluation of incidental FDG-avid colon lesions. *Eur J Nucl Med Mol Imaging*. 2020;47(10):2244.
7. Kamel Hasan O, Ravi Kumar A, Kong G...Hicks R. Efficacy of Peptide Receptor Radionuclide Therapy in Eshesioneuroblastoma. *J Nucl Med*. 2020;61(9):1326-1330.
8. Ravi Kumar A, Law WP, Wilson C et al. Tumour biology characterisation by imaging in clinic. (Book Chapter) IN: Beets-Tan et al (ed.). *Imaging and Interventional Radiology for Radiation Oncology*. 2020 Springer International Publishing ISBN 978-3-030-38260-5.
9. Violet J, Sandhu S...Ravi Kumar A...Hofman M. Long term follow-up and outcomes of re-treatment in an expanded 50 patient single-center phase II prospective trial of Lutetium-177 (177Lu) PSMA-617 theranostics in metastatic castrate-resistant prostate cancer. *J Nucl Med*. *J Nucl Med*. 2020;61(6):857-865.
10. Casswell G, Cavanagh K, Ravi Kumar A, Giddings C, McDowell L. Setting the stage: Contemporary Staging of Non-Melanomatous Skin Cancer and Implementation and Challenges with the American Joint Committee on Cancer Eighth Edition Staging Manual. *Oral Oncol*. 2019;98(11):102-108.
11. Ravi Kumar A, Law WP, Wilson C et al. Tumour biology characterisation by imaging in clinic. (Book Chapter) IN: *Imaging and Interventional Radiology for Radiation Oncology*.
12. Goncalves I, Burbury K...Ravi Kumar A...Hicks R. Characteristics and Outcomes of Therapy-Related Myeloid Neoplasms after 177Lu-DOTATATE peptide receptor radionuclide therapy (PRRT/PRCRT) for metastatic neuroendocrine neoplasia: A Single Institutional Series. *Eur J Nucl Med Mol Imaging* 2019;46(9):1902-1910.
13. Kong G, Schenberg T...Ravi Kumar A...Hicks R. The role of 68Ga-DOTA-Octreotate PET/CT in follow-up of SDH-associated pheochromocytoma and paraganglioma (PPGL). *J Clin Endocrinol Metab* 2019;104(11):5091-5099.
14. Thang SP, Violet J...Ravi Kumar A... Hofman M, Poor outcomes of patients with metastatic castration-resistant prostate cancer with low PSMA-expression deemed ineligible for Lutetium-177 PSMA therapy. *Eur Urol Oncol*. doi:10.1016/j.euo.2018.11.007.
15. Iravani A, Solomon B...Ravi Kumar A...Hicks R. Selective mitogen activated protein kinase (MAPK) pathway inhibition in radioiodine refractory differentiated thyroid cancer: evolving experience and protocol. *Thyroid* 2019;29(11):1634-1645.
16. Violet J, Jackson P...Ravi Kumar A...Hofman M. Dosimetry of Lu-177 PSMA-617 in metastatic castration-resistant prostate cancer: correlations between pre-therapeutic imaging and “whole body” tumour dosimetry with treatment outcomes. *J Nucl Med* 2019;60(4):517-523.
17. Pattison A, Cook A...Ravi Kumar A, Fielding D. EBUS-TBNA cytology specimens are predictive of occupational dust exposure in patients with bilateral mediastinal and hilar lymphadenopathy. *J Occup Environ Med* 2018;60(10):880-885.
18. Hofman MS, Violet J...Ravi Kumar A...Sandhu S. 177Lu-PSMA-617 radionuclide therapy in patients with metastatic castration-resistant prostate cancer: a single-centre, single-arm, phase 2 study. *Lancet Oncol* 2018;19(6):825-833.
19. Hirshoren N, Olayos E, Ravi Kumar A, Gyorki D. Pre-operative Positron Emission Tomography for Node Positive Head and Neck Cutaneous Squamous Cell Carcinoma. *Otolaryngol Head Neck Surg*. 2018;158(1):122-126.
20. Gibson G, Ravi Kumar AS, Steinke K et al. Risk stratification in the investigation of pulmonary nodules in a high risk cohort – PET/CT outperforms clinical risk prediction algorithms. *Intern Med J*. 2017;47(12):1385-1392.
21. Ravi Kumar AS, Tam CS, Hofman, MS. FDG PET in follicular lymphoma: more than a staging test? *Leuk Lymphoma*. 2017;16(1):1-6
22. Bennett O, Ravi Kumar AS, Agnew J. Focal inflammatory myositis on FDG PET/CT. *Clin Nucl Med*. 2016; 41(6):469-71.
23. Lee JC, Hartnett G, Ravi Kumar AS. Segmental Considerations in Colonoscopy Recommendations for Investigating Focal Colonic FDG Activity on PET/CT (letter). *World J Nucl Med*. 2015;14(3):225.
24. Nguyen P, Bashirzadeh F..... Ravi Kumar AS, Fielding D. Grey scale texture analysis of endobronchial ultrasound mini probe images for prediction of benign or malignant aetiology. *Respirology*. 2015;20(6):960-6.
25. Huang YT, Ravi Kumar AS, Bhuta S. 18-F-FDG PET CT as a Semi-quantitative Imaging Marker in HPV-p16 positive Oropharyngeal Squamous Cell Cancers. *Nucl Med Commun*. 2015;36(1):16-20.
26. Nguyen P, Bhatt B, Bashirzadeh F....Ravi Kumar A. Comparison of objective criteria and expert visual interpretation to classify benign and malignant hilar and mediastinal nodes on 18-F FDG PET/CT. *Respirology*. 2015;20(1):129-37.
27. Krishnamoorthy R, Ravi Kumar AS, Batstone M. FDG-PET/CT in Staging of Clear Cell Odontogenic Carcinoma. *Int J Oral Maxillofac Surg*. 2014;43(11):1326-9.
28. Huang YT, Aziz SI, Ravi Kumar AS. Gallium-68 DOTA-Tate positron emission tomography/computed tomography: Scintigraphic changes of adrenal glands following management of ectopic Cushing's syndrome by steroidogenesis inhibitors. *World J Nucl Med*. 2014;13(3):201-4.

29. Horsfeld MC, Ravi Kumar AS, Wallace BJ, Bartlett MB. Impact of relative head sensitivity differences in multi-head gamma cameras. *Australas Phys Eng Sci med.* 2014;37(2):405-11.
30. Gibson GM, Ravi Kumar AS. F-18 FDG uptake in multiple splenic foci on PET/CT - an unusual case of visceral Leishmaniasis. *Clin Nucl Med.* 2014;39(9):828-30
31. Walton AR, Formby MR, Ravi Kumar AS. Multi-modality imaging in parathyroid carcinoma: a tale of two nodules. *Radiology Case Reports.* 2015;10(1):1-4. DOI: <http://dx.doi.org/10.2484/rcr.v10i1.914>.
32. Mohandas JT, Ravi Kumar AS, Ranganathan D, Healy H et al. Splenunculus Masquerading as a Neuroendocrine Tumor of the Pancreatic Allograft in a Kidney-Pancreas Recipient. *Transplantation.* 2013;96(8):e59-e62.
33. Lee J, Hartnett G, Ravi Kumar A. Investigation of incidental bowel FDG uptake (letter). *J Gastrointest Surg.* 2013;17(12):2182.
34. Lin C, Ravi Kumar A, Keller J, et al. 18F-fluoro-L-thymidine Positron Emission Tomography for Mucosal Head and Neck Squamous Cell Carcinoma Treated with Definitive Chemoradiation: A Pilot Study of Nodal Assessment and Tracer Safety. *ISRN Molecular Imaging.* 2013; Article ID 710305. doi:10.1155/2013/710305.
35. Huang YT, Ravi Kumar A. Classical skeletal injuries shown on F-18 FDG PET/CT following successful cardiopulmonary resuscitation. *Clin Nucl Med.* 2013;38(5):395-6.
36. Lee J, Hartnett G, Ravi Kumar A. Lesion Location in Clinical Significance of Incidental Colorectal FDG Uptake (letter). *Clin Endosc.* 2012;45(4):451-2.
37. Lee J, Hartnett G, Ravi Kumar A. Timely investigation of incidental focal colorectal FDG uptake (letter). *Colorectal Dis.* 2012;14(7):897-8.
38. Bhatt M, Ravi Kumar A. FDG PET/CT appearance of benign Pilomatricoma. *Clin Nucl Med.* 2012;37(7):684-6.
39. Ravi Kumar A, Hartnett G, Lee J. FDG-avid lesions on PET scans without corresponding pathological findings (letter). *J Gastroenterol.* 2012;47(6):726-7.
40. Huang YT, Ravi Kumar A. Potential for truncation the scan length of restaging FDG-PET/CT following chemoradiotherapy in head and neck squamous cell carcinoma. *Nucl Med Commun.* 2012;33(5):503-8.
41. Lee J, Hartnett G, Ravi Kumar A. Predictive value according to location of incidental focal colorectal fluorodeoxyglucose uptake on positron emission tomography scans (letter). *Colorectal Dis.* 2012;14(5):642-3.
42. Nguyen P, Bashirzadeh F, ... Ravi Kumar A, Fielding D. Optical differentiation between malignant and benign lymphadenopathy by greyscale texture analysis of endobronchial ultrasound convex probe images. *Chest.* 2012;141(3):709-15.
43. Bhatt M, Bartlett M, Mallitt K, McTaggart S. Ravi Kumar A. Correlation of different published radionuclide GFR estimation techniques and proposed paediatric normative data. *Nucl Med Commun.* 2011;32(11):1088-1094.
44. Blazak J, Ravi Kumar A. Palpation Thyroiditis seen on F-18 FDG PET/CT. *Clin Nucl Med.* 2011;36(3):261-3.
45. Mugunthan N, Ravi Kumar A, Thomas P. Tumor Thrombus in the Great Veins from Papillary Carcinoma of the Thyroid: 131I Scan Findings. *J Clin Endocrinol Metab* 2010;95(6):2527-2528.
46. Hodgson R, Huang YT, Steinke K, Ravi Kumar A. FDG-PET/CT in Evaluation and Prognostication of Primary Prostate Lymphoma. *Clin Nucl Med.* 2010;35(6):418-420.
47. Kennedy G, Restall J, Morris K, Ravi Kumar A. Post-therapy calcification can result in false positive FDG-PET scans in patients with non-Hodgkin's lymphoma. *Leuk Lymphoma.* 2010; 51(2):348-9.
48. Lee JC, Huang YT, Ravi Kumar A. Variable FDG Avidity of Recurrent Metastatic Adult Granulosa Cell Tumor. *Clin Nucl Med.* 2009;34(10):710-712.
49. Lee JC, Hartnett GF, Hughes BG, Ravi Kumar A. The segmental distribution and clinical significance of colorectal fluorodeoxyglucose uptake incidentally detected on PET-CT. *Nucl Med Commun.* 2009;30(5):333-7.
50. Ravi Kumar A. Current Clinical Applications of Positron Emission Tomography. *Australian Prescriber.* 2008;(31):123-8.
51. Kannan S, Ravi Kumar A, Griffiths M. Incidental finding of thyroid uptake of Tc-99m tetrofosmin on a myocardial perfusion scan. *Clin Nucl Med.* 2007;32(1):73-5.
52. Ravi Kumar A, Bui C, Swarc G, Dixon H. Florid polyarticular gout mimicking septic arthritis. *Clin Nucl Med,* 2004;29(4):262-3.