

DR LOOI WEN SHEN



Dr Looi Wen Shen graduated from National University Singapore (YLL-SOM) in 2008 and completed his specialist training at National Cancer Centre Singapore (NCCS). Formerly a Consultant radiation oncologist at NCCS and Clinical Assistant Professor at Duke-NUS Medical School, he also practised at the University of Florida Proton Therapy Institute, USA, where he completed formal subspecialty fellowship training in adult and paediatric proton therapy. Subsequently, he started the paediatric proton therapy program at NCCS. Dr Looi is also the only radiation oncologist who is a member of the Children's Oncology Group (COG) in Singapore. He also received further training at the Taipei Medical University Hospital Proton Centre for regionally endemic diseases such as liver cancer and nasopharyngeal cancer. His interests are in prostate / paediatric / sarcoma / head and neck / brain and stereotactic body radiation therapy (SBRT). Dr Looi is currently Head of Department (HoD) of SAM Radiation Oncology.



Dr Looi Wen Shen is a radiation oncologist of Proton Therapy SG, Singapore Institute of Advanced Medicine. He graduated from Yong Loo Lin School of Medicine, National University of Singapore in 2008, and went on to complete his residency training in National Cancer Centre Singapore (NCCS), before receiving specialist accreditation in radiation oncology by the Specialist Accreditation Board. He worked as a Consultant in the Division of Radiation Oncology, National Cancer Centre Singapore; Clinical Assistant Professor in Duke-NUS medical school; and Clinical Teacher in the Lee Kong Chian School of Medicine. Dr Looi is a radiation oncologist with substantial experience in proton therapy, having practised at the University of Florida Proton Therapy Institute, which has the largest paediatric radiotherapy in the world, where he completed subspecialty fellowship training in proton therapy and paediatric radiotherapy as an Adjunct Clinical Post-Doctoral Associate.

He also received further proton therapy training at the Taiwan Medical University Hospital Proton Centre for regionally endemic diseases such as liver cancer and nasopharyngeal cancer. Dr Looi is proud to have been able to start the paediatric proton program at National Cancer Centre Singapore. During his time in public service in NCCS, Dr Looi oversaw the creation of a comprehensive paediatric radiation oncology program that integrated allied healthcare to improve patient satisfaction and experience. As an educator to the younger generation of doctors, Dr Looi obtained a certificate for Essential Skills in Medical Education for this. He is adept at 3D conformal radiotherapy (3DCRT), intensity modulated radiotherapy (IMRT), volumetric modulated arc therapy (VMAT), stereotactic body radiotherapy (SBRT), and intensity modulated proton therapy (IMPT).

Dr Looi is one of the few regional radiation oncologist members of the Children's Oncology Group (COG). He was the NCCS representative for the IAEA Interregional Technical Cooperation Project INT6065: "Contributing towards Improved Survival in Childhood Cancer Using Radiation Medicine and Nutrition". Additionally, he is a member of the organizing committee for the International Society of Paediatric Oncology (SIOP) Asia Congress of 2024. He is also a member of several other professional societies including the American Society for Radiation Oncology (ASTRO), Academy of Medicine, Singapore (AMS), Royal College of Radiology (RCR) (UK), Children's Cancer and Leukaemia Group (CCLG) (UK), and the Paediatric Radiation Oncology Society (PROS). Today, Dr Looi continues to contribute to public healthcare as a Visiting Consultant in KK Women's and Children's Hospital and National Cancer Centre Singapore. Additionally, he is listed in the Chordoma Foundation Directory (Wen Shen Looi).

While in NCCS, his research was published in journals such as the International Journal of Radiation Oncology Biology and Physics, and Medical Physics, Pediatric Blood and Cancer, and the Archives of Disease in Childhood. Through his research, Dr Looi endeavours to decrease the acute and late side effects of radiation in patients, thus improving their quality of life. Dr Looi will continue his research in the Singapore Institute of Advanced Medicine (SAM), focusing on the clinical outcomes of proton therapy. SAM's plans for incorporation of FLASH proton therapy will also add an exciting dimension to the local proton research and clinical scene.

Education and Training

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| 2020 - 2021 | Postdoctoral Fellowship- Paediatric and Adult Proton Therapy at the University of Florida Health Proton Therapy Institute (UFPTI) |
| 2020 | United States Medical Licensing Examination (USMLE) |
| 2017 | Fellow, Academy of Medicine, Singapore (FAMS) |
| 2017 | Fellow of the Royal College of Radiologists (FRCR Clinical Oncology) |
| 2013 - 2017 | Residency- Radiation Oncology, National Cancer Centre, Singapore |
| 2003 - 2008 | Bachelor of Medicine, Bachelor of Surgery (M.B.B.S)- Yong Loo Lin, School of Medicine, National University of Singapore |

Certification

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| 2020–2022 | Florida Board of Medicine |
| 2020 | Standard Certificate for United States Medical Licencing Examination (USMLE)- Education Commission for Foreign Medical Graduates (ECFMG) |
| 2019 | Essential Skills in Medical Education Certificate (ESME)- Association for Medical Education in Europe (AMEE) |
| 2017 | Certificate of Specialist Accreditation, Radiation Oncology- Specialist Accreditation Board, Singapore |
| 2017 | Certificate of Specialist Registration, Radiation Oncology, Singapore Medical Council |
| 2008 | Certificate of Medical Registration, Radiation Oncology, Singapore Medical Council |

Past and Present Appointments

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| 2023 | Head & Consultant, Proton Therapy Singapore, Singapore Institute of Advanced Medicine |
| 2021 - | Clinical Assistant Professor, Duke-NUS |
| 2021 - 2023 | Clinical Teacher, Lee Kong Chian, School of Medicine |
| 2020 - 2021 | Adjunct Clinical Postdoctoral Associate, University of Florida College of Medicine |
| 2019 - | Visiting Consultant, Hematology/Oncology Service, KKH, Singapore. |
| 2019 - 2021 | Clinical Instructor at Duke-NUS Medical School |
| 2017 - 2023 | Consultant, Radiation Oncology, National Cancer Centre, Singapore |

Professional Licensure

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| 2008 - | Practicing Certificate, Singapore Medical Council |
| 2017 - | Radiation Oncology Specialty Certificate, Specialist Accreditation Board of Singapore |
| 2020 - 2022 | Registration for Resident / House Physician, Florida Board of Medicine |

Professional Memberships

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| 2021 - | Children's Cancer and Leukaemia Group, International Member |
| 2021 - | Children's Oncology Group, International Associate Member |
| 2021 - | VIVA Asia Brain and Solid Tumour Working Group Member |
| 2020 - | American Society for Radiation Oncology |
| 2019 - | Paediatric Radiation Oncology Society, Member |
| 2018 - 2019 | Singapore Radiological Society, Executive Committee Member (co-opted) |
| 2017 - | Royal College of Radiology (Clinical Oncology), Fellow (FRCR) |
| 2017 - | Academy of Medicine Singapore, Fellow (FAMS) |
| 2008 - 2014 | Singapore Medical Association |

Awards

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| 2019 | Health Manpower Development Program (HMDP) award |
| 2016 | SAF resuscitation distinction award |
| 2013 | Republic of Singapore Air Force Air Power Generation Command Commendation 2013 |
| 2013 | Resuscitation Distinction Award SAF Medical Corps |
| 2009 | Medical Society YLLSOM National University of Singapore Colours Award |

Previous Grants

1. Development of a Virtual/Mixed Reality Proton Gantry Room prototype to aid paediatric patient counselling, FY2021.
2. Kids, adolescent and young adult (KAYA) electronic patient-reported outcomes for Quality of Life metric measurements following radiotherapy, FY2023.
3. Improving comfort in Kids, Adolescent and Young adults during radiotherapy: Open-face masks in paediatric patients for immobilisation, FY2023.

Publications

- Tan AJL, Tey ML, Seow WT, Low DCY, Chang KTE, Ng LP, Looi WS, Wong RX, Tan EEK, Low SYY. Intraoperative Fluorescein Sodium in Pediatric Neurosurgery: A Preliminary Case Series from a Singapore Children's Hospital. *NeuroSci.* 2023; 4(1):54-64. <https://doi.org/10.3390/neurosci4010007>
- Liu KX, Indelicato DJ, Paulino AC, Looi WS, Catalano PJ, Chintagumpala MM, Gallotto SL, Marcus KJ, Haas-Kogan DA, Tarbell NJ, MacDonald SM, Mahajan A, Yock TI. Multi-institutional Characterization of Outcomes for Pediatric and Young Adult Patients With High-Risk Myxopapillary Ependymoma After Radiation Therapy. *Int J Radiat Oncol Biol Phys.* 2023 Jul 10:S0360-3016(23)04708-9. doi: 10.1016/j.ijrobp.2023.06.2293. Epub ahead of print. PMID: 37437812.
- Lim YG, Tan EE, Looi WS, Wong RX, Chang KT, Low DC, Seow WT, Low SY. Biopsy of paediatric brainstem intrinsic tumours: Experience from a Singapore Children's Hospital. *J Clin Neurosci.* 2022 Oct 10;106:8-13. doi: 10.1016/j.jocn.2022.09.021. Epub ahead of print. PMID: 36228504.
- Hong KT, Han JW, Fuji H, Byun HK, Koh KN, Wong RX, Lee HL, Yoon HI, Lee JH, Phi JH, Kim SK, Kim DS, Lyu CJ, Choi JY, Kang HJ, Chen YW, Lee YY, Im HJ, Ra YS, Do Ahn S, Low SYY, Looi WS, Park HJ, Suh YG, Suh CO, Wang KC, Tan EEK, Wong TT, Kim JY. Outcomes of intracranial non-germinomatous germ cell tumors: a retrospective Asian multinational study on treatment strategies and prognostic factors. *J Neurooncol.* 2022 Aug 31. doi: 10.1007/s11060-022-04100-w. Epub ahead of print. PMID: 36045266.
- Lim JX, Tan EEK, Ng LP, Seow WT, Chang KTE, Wong RX, Looi WS, Low DCY, Low SYY. Monomodality versus Combined Therapy in Optic Pathway Gliomas-20-Year Experience from a Singapore Children's Hospital. *Front Surg.* 2022 May 2;9:827675. doi: 10.3389/fsurg.2022.827675. PMID: 35586500; PMCID: PMC9108767.
- Li Y, Ong WS, Shwe MTT, Yit NLF, Quek SZH, Pang EPP, Looi WS, Nei WL, Wang MLC, Chua MLK, Tan TWK, Chua ET, Ng CT, Tuan JKL. Cardiovascular toxicities of androgen deprivation therapy in Asian men with localized prostate cancer after curative radiotherapy: a registry-based observational study. *Cardiooncology.* 2022 Mar 14;8(1):4. doi: 10.1186/s40959-022-00131-4. PMID: 35287756.
- Koh KN, Wong RX, Lee DE, Han JW, Byun HK, Yoon HI, Kim DS, Lyu CJ, Kang HJ, Hong KT, Lee JH, Kim IH, Phi JH, Kim SK, Wong TT, Lee HL, Lai IC, Kang YM, Ra YS, Ahn SD, Im HJ, Looi WS, Low SYY, Tan EEK, Park HJ, Shin SH, Fuji H, Suh CO, Chen YW, Kim JY. Outcomes of intracranial germinoma-a retrospective multinational Asian study on effect of clinical presentation and differential treatment strategies. *Neuro Oncol.* 2021 Dec 22:22:2295. doi: 10.1093/neuonc/noab295. Epub ahead of print. PMID: 34935949.
- Yen Sin Koh, Jason Yongsheng Chan, Wen Shen Looi, Mohamad Farid, N Gopalakrishna Iyer, Ci-An Gerald Tay, Kiattisa Sommat, Ru Xin Wong. Outcomes of head and neck angiosarcoma with different treatment modalities: a 20-year single institutional experience. *Precision Cancer Medicine* 2022 March.

- Valerie Ting Lim, Angelie Cabe Gacasan, Jeffrey Kit Loong Tuan, Terence Wee Kiat Tan, Youquan Li, Wen Long Nei, Wen Shen Looi, Xinying Lin, Hong Qi Tan, Eric Chern-Pin Chua, Eric Pei Ping Pang. Evaluation of inter- and intra-observer variations in prostate gland delineation using CT-alone versus CT/TPUS. *Rep Pract Oncol Radiother* 2022;27(1):97-103. DOI: 10.5603/RPOR.a2022.0004
- Hyperfractionated-Accelerated Reirradiation with Proton Therapy for Radiation-Associated Breast Angiosarcoma. Wen Shen Looi, MBBS, FRCR; Julie A. Bradley, MD; Xiaoying Liang, PhD; Christiana M. Shaw, MD; Mark Leyngold, MD; Raymond B. Mailhot Vega, MD, MPH; Eric D. Brooks, MD; Michael S. Rutenberg, MD, PhD; Lisa R. Spiguel, MD; Fantine Giap, MD; Nancy P. Mendenhall, MD. *International Journal of Particle Therapy*. <https://doi.org/10.14338/IJPT-21-00031.1> 2022/1/18
- Li Y, Chan Kong Ngai T, Zhou S, Yap Haw Hwong J, Pang Pei Ping E, Ong Li Kuan A, Wang Lian Chek M, Chua Lee Kiang M, Looi WS, Nei WL, Chua ET, On WLK, Tan Wee Kiat T, Yuen Shyi Peng J, Tuan Kit Loong J. A comparative analysis between low-dose-rate brachytherapy and external beam radiation therapy for low- and intermediate-risk prostate cancer in Asian men. *Acta Oncol*. 2021 Jul 14:1-5. doi: 10.1080/0284186X.2021.1950921. Epub ahead of print. PMID: 34259123.
- Looi WS, Indelicato DJ, Rutenberg MS. The Role of Radiation Therapy for Symptomatic Desmoid Tumors. *Curr Treat Options Oncol*. 2021 Mar 1;22(4):34. doi: 10.1007/s11864-021-00831-6. PMID: 33649873.
- Bte Syed Sulaiman N, Kuick CH, Chang KTE, Wan KR, Looi WS, Low DCY, Seow WT, Low SYY. Cytokines in Pediatric Pilocytic Astrocytomas: A Clinico-Pathological Study. *NeuroSci*. 2021; 2(1):95-108. <https://doi.org/10.3390/neurosci2010006>
- Indelicato DJ, Bates JE, Mailhot Vega RB, Rotondo RL, Hoppe BS, Morris CG, Looi WS, Sandler ES, Aldana PR, Bradley JA. Second tumor risk in children treated with proton therapy. *Pediatr Blood Cancer*. 2021 Feb 9:e28941. doi: 10.1002/pbc.28941. Epub ahead of print. PMID: 33565257.
- Indelicato DJ, Rotondo RL, Mailhot Vega RB, Holtzman AL, Looi WS, Morris CG, Sandler ES, Aldana PR, Bradley JA. Local Control Following Proton Therapy for Pediatric Chordoma. *Int J Radiat Oncol Biol Phys*. 2020 Nov 27:S0360-3016(20)34591-0. doi: 10.1016/j.ijrobp.2020.11.051. Epub ahead of print. PMID: 33253819.
- Looi WS, Indelicato DJ, Mailhot Vega RB, Morris CG, Sandler E, Aldana PR, Bradley JA. Outcomes following limited-volume proton therapy for multifocal spinal myxopapillary ependymoma. *Pediatr Blood Cancer*. 2020 Nov 23:e28820. doi: 10.1002/pbc.28820. Epub ahead of print. PMID: 33226179.
- Low SYY, Bte Syed Sulaiman N, Tan EEK, Ng LP, Kuick CH, Chang KTE, Tang PH, Wong RX, Looi WS, Low DCY, Seow WT. Cerebrospinal fluid cytokines in metastatic group 3 and 4 medulloblastoma. *BMC Cancer*. 2020 Jun 15;20(1):554. doi: 10.1186/s12885-020-07048-0. PMID: 32539808; PMCID: PMC7296667.
- Pang EPP, Knight K, Park SY, Lian W, Master Z, Baird M, Chan JWX, Wang MLC, Tan TWK, Chua MLK, Chua ET, Looi WS, Nei WL, Tuan JKL. Duration-dependent margins for prostate radiotherapy-a practical motion mitigation strategy. *Strahlenther Onkol*. 2020 Jul;196(7):657-663. doi: 10.1007/s00066-019-01558-y. Epub 2020 Jan 13. PMID: 31932995.
- Looi WS, Goh SH, Tan CJ, Yeoh KW, Seng MS. Adolescent with facial swelling. *Arch Dis Child Educ Pract Ed*. 2019 Oct 22:edpract-2019-317654. doi: 10.1136/archdischild-2019-317654. Epub ahead of print. PMID: 31641021.
- Looi WS, Low DCY, Low SYY, Goh SH. Neonatal orbital swelling due to intracranial teratoma. *Arch Dis Child Fetal Neonatal Ed*. 2019 Jul;104(4):F365. doi: 10.1136/archdischild-2018-316337. Epub 2018 Dec 14. PMID: 30552092.