

Curriculum Vitae

PERSONAL DATA

Full Name: LEE Wee Yee Shara

E-mail Address: shara.lee@polyu.edu.hk

EDUCATION

BSc (Hons) Radiography (Radiation Therapy) 1st Class Honours, The Hong Kong Polytechnic University

PhD (Anaesthesia & Intensive Care), Faculty of Medicine, The Chinese University of Hong Kong

MSc (Cardiology), The Chinese University of Hong Kong

PROFESSIONAL EXPERIENCES

July 2019- Present:

Associate Professor & Deputy Programme Leader, Department of Health Technology & Informatics, Faculty of Health & Social Sciences, The Hong Kong Polytechnic University

July 2013- June 2019:

Assistant Professor, Department of Health Technology & Informatics, Faculty of Health & Social Sciences, The Hong Kong Polytechnic University

July 2013- June 2018:

Adjunct Assistant Professor, Department of Anaesthesia and Intensive Care, Faculty of Medicine, The Chinese University of Hong Kong

Sept-2014- Present:

Honorary Radiation Therapist, Department of Clinical Oncology, Prince of Wales Hospital

May-2014- Apr 2017:

Honorary Radiation Therapist, Department of Clinical Oncology, Tuen Mun Hospital

June 2008- May 2013:

Post-doctoral Fellow, Department of Chemical Pathology, Faculty of Medicine, The Chinese University of Hong Kong

PROFESSIONAL RECOGNITION AND SERVICES

- Fellow, The Hong Kong College of Radiographers and Radiation Therapists (HKCRRT) [Pending, Jul 2021]
- Registered Radiation Therapist, The Supplementary Medical Professions Council of HK
- Member, The Hong Kong Society of Children's Palliative Care (HKSCPC)

TEACHING AWARDS

Finalist, 2018 University Grants Council (UGC) teaching award (Early Career Faculty)

Faculty Teaching Prize (Individual), Faculty of Health & Social Sciences (2017-18)

Faculty Teaching Award (Team Award as Leader), Faculty of Health & Social Sciences (2017-18)

Nominee for the 2016 UGC teaching award (Early Career Faculty), Faculty of Health & Social Sciences

Departmental Teaching Award (Individual), Department of Health Technology & Informatics (2016-17)

Departmental Teaching Award (Team Award-Leader), Department of Health Technology & Informatics (2016-17, 2020-21)

Departmental Teaching Award (Individual), Department of Health Technology & Informatics (2014-15)

TEACHING & LEARNING GRANTS

1) Online Teaching Development and Educational Research Grant

Development of structured simulation-based online training and assessment platform for radiography students

Role: Chief applicant

Amount: HKD \$999,950

2) Initiatives for Virtual Teaching and Learning Grant

Online Proctored Assessment and Academic Integrity: A review of platforms, tools and approaches, and practical solutions for differing assessment scenarios in PolyU

Role: Co-applicant

Amount: HKD \$1,200,000

RESEARCH GRANTS

- 1) Co-investigator: “Ergonomic Leggings with Twisted Actuation Yarns for Improving Compression Therapy.” Ref No. 15218921, RGC General Research Fund (GRF), 6/2021, HK\$ 815,601.
- 2) Co-investigator: “Intelligent Management of Chemo-radiotherapy-induced Clinical and Social Effects of Locoregionally Advanced Nasopharyngeal Carcinoma Patients.” Project of Strategic Importance 2020-21, HK\$2,000,000.
- 3) Co-investigator: “Heart to Heart: Innovative solution to tackle hypertension in Asia-Pacific older adults.” Strategic Research Excellence Fund 2020-21 (Massey University, New Zealand), NZD \$40,000.
- 4) Principal investigator: “Management of oral mucositis using low-level laser therapy in nasopharyngeal cancer patients receiving chemo-radiotherapy: A randomized-controlled trial (MAGNETO).” Ref No. 07183176, Health and Medical Research Fund (HMRF), 3/2020, HK\$1,425,760.
- 5) Principal investigator: “Prevention of vasovagal reactions in blood donors: A randomized double-blinded controlled comparison of efficacy and haemodynamic effects of oral prehydration fluids.” Ref No. 12130371, Health and Medical Research Fund (HMRF), 06/2015, HK\$999,042.
- 6) Co-investigator: “Randomized evaluative Study of Phenylephrine or Norepinephrine for maintenance of blood pressure during spinal anaesthesia for caesarean delivery: The RESPOND2 study.” RGC General Research Fund (GRF), 2016-17, HK\$1,673,726.

Submitted GRF Grant with Rating of 3.5:

- Principal investigator: Management of radiation-induced dermatitis using low-level laser therapy in nasopharyngeal cancer patients receiving chemoradiotherapy: A randomized, double-blinded controlled trial (MARVEL), 2017-18
- Principal investigator: Management of radiation-induced dermatitis using low-level laser therapy in nasopharyngeal cancer patients receiving chemoradiotherapy: A randomized, double-blinded controlled trial (MARVEL), 2018-19

RESEARCH INTERESTS

Radiation Therapy and Medical imaging

- Management of Radiotherapy side-effects using Photobiomodulation
- Emergency Management Training and Clinical Simulation
- Vascular imaging & flow assessment using ultrasound

Non-invasive haemodynamic monitoring

- Cardiovascular responses during blood donation
- Exercise responses

SERVICES TO PROFESSIONAL & SCIENTIFIC BODIES

- Education Committee, The Hong Kong Radiographers Board (Nov-2019 – Present)
- Examination Committee, The Hong Kong Radiographers Board (Oct 2020 – Present)
- Reviewer, British Journal of Anaesthesia

INVITED PRESENTATIONS/ LECTURES

International Conferences

- Invited guest speaker for the ‘2018 Sichuan Provincial ICU Annual Scientific Meeting’. Chengdu, Sichuan (20-22 July, 2018) – Lecture: ‘Septic Shock: Haemodynamic Assessment Demystified’
- Invited guest speaker for the ‘2017 年中華醫學會放射治療技術學學術會議’, 湖南長沙市 (25-27 August, 2017) - Lecture: ‘放射治療師透過發展臨床技術優化病人護理’
- Invited guest speaker for the 5th International Symposium of Neonatal Respiratory and Intensive Care Medicine, Guangzhou, China (9-10 October 2015) - ‘Non-invasive Haemodynamic Monitoring’ and ‘Haemodynamic assessment of Septic Shock’

Local Conferences

- Invited guest speaker and Expert Panel Moderator: 2017 Annual Scientific Meeting of the Hong Kong Society for Simulation in Healthcare, Hong Kong, China (9-10 September 2017)
 - Expert Panel Moderator: Use of Simulation in Assessment in Health care
 - Lecture: Simulation for Radiography Education & Assessment
- Invited guest lecturer for the Doppler cardiac output monitoring course organized by the Accident and Emergency Academic Unit, Prince of Wales Hospital
 - Apr 2012, Aug-2012, Dec-2012 and Apr-2013
 - Lecture topic: ‘Introduction to Haemodynamics’ and ‘Basic Principles of Doppler Cardiac Output Monitoring’

RESEARCH OUTPUTS

Research Accounts:

ORCID ID: 0000-0001-5257-2076

Scopus Author ID: 34971469100

ResearcherID: G-1874-2014

Selected Refereed Publications:

1. Li Y, Kwong LW, Wu VWC, Yip SP, Law HKW, **Lee SWY**, Ying MTC. Computer-assisted ultrasound assessment of plaque characteristics in radiation-induced and non-radiation-induced carotid atherosclerosis. *Quantitative Imaging in Medicine and Surgery* 2021;11: 2292-306. *IF: 3.226*
2. **Lee SWY**, Cheung CHY, Ying MTC, Tam VCW, Khaw ML. Reply: Performance evaluation of portable bioimpedance cardiac output monitor for measuring haemodynamic changes in athletes during a head-up tilt test. *J Applied Physiol* 2021; 130: 673-4. *IF: 3.044*
3. Tam VCW, Tam SY, Khaw ML, Law HKW, Chan CPL, **Lee SWY**. Behavioural Insights and Attitudes on Community Masking during COVID-19 Outbreak in Hong Kong. *HK Med J* 2021; 27: 106-12. *IF:1.679*
4. Tam SY, Tam VCW, Shanmugasundaram R, Khaw ML, Law HKW, **Lee SWY**. Review on the cellular mechanisms of low-level laser therapy use in oncology. *Front. Oncol.* 2020 10:1255. *IF: 4.137*
5. Ngan Kee WD, **Lee SWY**, Ng FF, Lee A. Norepinephrine versus phenylephrine during spinal anaesthesia for Caesarean delivery: A randomised double-blinded pragmatic non-inferiority study of neonatal outcome. *Br J Anaesth* 2020; 125: 588-95. *IF: 6.880*
6. Tam VCW, Tam SY, Poon WK, Law HKW, **Lee SWY**. A reality check on the use of face masks during the COVID-19 outbreak in Hong Kong. *Lancet eClinicalMedicine* 2020; 22: 100356 (<https://info.thelancet.com/eclinm-covid-19>)
7. Cheung CHY, Khaw ML, Tam VCW, Ying MTC, **Lee SWY**. Performance evaluation of portable bioimpedance cardiac output monitor for measuring haemodynamic changes in athletes during a head-up tilt test. *J Applied Physiol* 2020; 128: 1146-52. *IF: 3.044*
8. Lee DCW, Law HKW, Ajmol A, Sheridan S, Wong SHS, **Lee SWY**. Compression Garments-induced Leg Changes Increase Hemodynamic Responses in Healthy Individuals. *International Journal of Sports Medicine* 2020; 41: 3-11 *IF: 2.556*
9. Ngan Kee WD, **Lee SWY**, Ng FF, Khaw KS. Prophylactic Norepinephrine infusion for preventing Hypotension during spinal anesthesia for Cesarean delivery. *Obs Anesth Digest* 2019; 39: 29. *IF: 3.68*
10. Ngan Kee WD, Ng FF, **Lee SWY**, Lee A. Norepinephrine versus phenylephrine during spinal anaesthesia for caesarean delivery: a randomized double-blinded pragmatic non-inferiority study comparing neonatal outcome. *Int J Obstet Anaesth* 2019; 39: S7. *IF: 3.404*
11. Wu VWC, Ho YY, Tang YS, Lam PW, Yeung HK, **Lee SWY**. Comparison of the verification performance and radiation dose between ExacTrac x-ray system and On-Board Imager— A phantom study. *Medical Dosimetry* 2019; 44: 15-19. *IF: 0.886*
12. Lee DCW, **Lee SWY**, Khaw KS, Ajmol AJ, Sheridan SE, Wong SHS. Haemodynamic responses of wearing low-pressure sports compression tights during an orthostatic challenge in healthy individuals. *Journal of Science & Medicine in Sport* 2018; 21: 1062-67. *IF: 3.929*
13. Ngan Kee WD, **Lee SWY**, Ng FF, Khaw KS. Evaluation of prophylactic norepinephrine infusion for preventing hypotension during spinal anesthesia for Cesarean delivery. *Anesthesia & Analgesia* 2018; 126: 1989-94. *IF: 3.489*

14. Ngan Kee WD, Tam YH, Khaw KS, Ng FF, **Lee SWY**. Closed-loop feedback computer-controlled phenylephrine for maintenance of blood pressure during spinal anesthesia for Cesarean delivery: A randomized trial comparing automated boluses versus infusion. *Anesthesia & Analgesia* 2017; 125: 117-23 [PMID: 28368936]. *IF: 3.489*
15. Ngan Kee WD, Tam YH, Khaw KS, Ng FF, **Lee SWY**. Performance of a closed-loop feedback computer-controlled infusion system for maintaining blood pressure during spinal anaesthesia for caesarean section: a randomized controlled comparison of norepinephrine versus phenylephrine. *Journal of Clinical Monitoring and Computing* 2017; 31: 617 [PMID: 27139726]. *IF: 2.450*
16. Zhang YT, Lin CG, Wu JH, Jiang XB, **Lee SWY**, Tam SY, Wu VWC. A longitudinal evaluation of early anatomical changes of parotid gland in intensity modulated radiotherapy of nasopharyngeal carcinoma patient with parapharyngeal space involvement. *J Med Radiat Sc* 2017; 64: 188-94.
17. Zhang J, Critchley LAH, Lee CW, Khaw KS, **Lee SWY**. The Effect of Head Up Tilting on bioreactance cardiac output and stroke volume readings using suprasternal subcutaneous Doppler as a control in healthy young adults. *Journal of Clinical Monitoring and Computing* 2016; 30: 519-26. *IF: 2.450*
18. Lee DCW, Khaw KS, **Lee SWY**, Ali A, O'Reilly J, Wong SHS. Wearing Compression Garment Enhances Cardiac Efficiency from Supine to Head Up Tilt. *Med Sci Sports Exerc* 2016; 48: 1039. *IF: 4.459*
19. Jones AYM, Ngai SPC, Ying MTC, Morris NR, Laakso EL, Lee SWY, Parry SM. Sonographic evaluation of diaphragmatic function during breathing control. *Physiotherapy Theory and Practice* 2017; 33: 560-7. *IF: 1.129*
20. Lu YY, **Lee SWY**, Khaw KS, Du R. A 360-degree Holographic Display System for Radiotherapy Treatment Planning. *Computer-Aided Design and Applications* 2015; 13: 289-294.
21. Khaw KS, **Lee SWY**, Ngan Kee WD, Law LW, Lau TK, Ng FF, Leung TY. Randomized trial of anaesthetic interventions in external cephalic version for breech presentation. *Br J Anaesth* 2015; 114: 944-50. *IF: 6.199*
22. Ngan Kee WD, **Lee SWY**, Khaw KS, Ng FF. Randomized Double-blinded Comparison of Norepinephrine and Phenylephrine for Maintenance of Blood Pressure during Spinal Anesthesia for Cesarean Delivery. *Anesth* 2015; 122: 736-45. *IF: 6.523*
23. Ngan Kee WD, **Lee SWY**, Khaw KS, Ng FF. Haemodynamic effects of glycopyrrolate pretreatment before phenylephrine infusion during spinal anaesthesia for Caesarean section. *Int J Obstet Anesth* 2013; 22: 179-87. *IF: 1.958*
24. **Lee SWY**, Khaw KS, Ngan Kee WD, Leung TY, Critchley LAH. Haemodynamic effects from aortocaval compression at different angles of lateral tilt in non-labouring term pregnant women. *Br J Anaesth* 2012; 109: 950-6. (This paper is accompanied by an editorial). *IF: 6.199*
25. Yu SCY, **Lee SWY**, Jiang P, Leung TY, Chan KCA, Chiu RWK, Lo YMD. High resolution profiling of fetal DNA clearance from maternal plasma by massively parallel sequencing. *Clin Chem* 2013; 59: 1228-1237. *IF: 8.008* <http://www.clinchem.org/content/59/8/1228.long>
26. Chim SC, Lee WS, Ting YH, Chan OK, **Lee SWY**, Leung TY. Systemic identification of spontaneous preterm birth-associated RNA transcripts in maternal plasma. *PLoS ONE* 2012; 7: e34328. *IF: 2.776* <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0034328>

27. **Lee SWY**, Khaw KS, Ngan Kee WD, Leung TY. Monitoring a wider range of haemodynamic variables will be useful for management of hypotension in obstetric spinal anaesthesia. Letter *Br J Anaesth* 2009; 103: 457-8. *IF: 6.199*
28. Khaw KS, Ngan Kee WD, Tam YH, Wong MK, **Lee SWY**. Survey and evaluation of modified oxygen delivery devices used for suspected severe acute respiratory syndrome and other high-risk patients in Hong Kong. *HK Med J* 2008; 14 (Suppl 5): 27-31.
29. Khaw KS, Ngan Kee WD, **Lee SWY**. Hypotension during spinal anaesthesia for Caesarean section: Implications, detection prevention and treatment. *Fetal & Maternal Med Rev* 2006; 17: 157-83.
30. White P, **Lee SWY**, Wong CWY, Lee AKW, Cheung DN. Role development for therapeutic radiographers in the public hospitals in Hong Kong. *J Radiotherapy Practice* 2004; 4: 66-77.

Selected Publications: Conference papers

1. **Lee SWY**, Tam VCW, Chan CL, Kwong LW, Wu VWC, Wong KW, Ramkumar S, Khaw KS. Management of radiation-induced dermatitis using low-level laser therapy (LLLT) in nasopharyngeal cancer (NPC) patients receiving chemo-radiotherapy: A randomized-controlled trial: A Pilot report. ESTRO meets Asia (European Society for Radiotherapy & Oncology) 2018, Singapore 7-9 Dec 2018.
2. Ng CF, Lo TK, Ngan YT, Tse MN, Chan LL, **Lee SWY**. Management of radiation-induced skin reactions: A survey of current practice in public hospitals of Hong Kong. 21st Asia-Australasia Conference of Radiological Technologists (AACRT) 2017, Hong Kong 23-25 Jun 2017.
3. Chung KW, Chan HY, Chung TH, Lam LK, **Lee SWY**. Role development of radiation therapists to provide advanced patient care among public hospitals in Hong Kong. 21st Asia-Australasia Conference of Radiological Technologists (AACRT) 2017, Hong Kong 23-25 Jun 2017.
4. Lee DCW, Ali A, Law HKW, Khaw KS, **Lee SWY**, Wong SHS. Lower body compression on leg blood-vessel morphological response via MRI in healthy individuals. 2nd International conference in Sports Science & Technology (ICSST), Singapore Dec 2016.
5. Lee DCW, Khaw KS, **Lee SWY**, Ali A, Wong SHS. Wearing compression garment enhances cardiac efficiency from supine to head up tilt. American College of Sports Medicine (ACSM) Annual Meeting, Boston 2016.
6. **Lee SWY**, Choi YH, Kwong YP, Keung HK, Kwong CY, Or LM, Wu VWC. Dosimetric Impact of Flattening Filter and Flattening Filter-Free Beams on Intensity Modulated Radiation Therapy Planning of Non-Small Cell Lung Carcinomas. European Society for Radiotherapy & Oncology 2016, Turin 29 Apr-3 May 2016.
7. Ngan Kee WD, YH Tam, Khaw KS, Ng FF, **Lee SWY**. Closed-loop feedback computer-controlled phenylephrine for maintenance of blood pressure during spinal anaesthesia for caesarean section: randomized comparison of automated boluses versus infusion. *Int J Obstet Anesth* 2016; 25: S11. (*This paper was presented at the Obstetric Anaesthetists Association meeting in May 2016*). *IF: 1.832 (Ranked 16th among Anaesthesia Journals)*
8. Lo WY, Chan TH, Tse TS, Kong CH, Luk KK, **Lee SWY**. Cardiovascular changes in response to exercises among healthy active and sedentary individuals. Hong Kong Radiographer and Radiation Therapist Conference (HKRRTC) 2015, Hong Kong 26-28 Jun 2015.

9. Lam WH, Lam YN, Lam SM, Chan KK, Tsui WK, **Lee SWY**. Dosimetric comparison of the organs-at-risk contouring using 4DCT and conventional CT in stereotactic body radiotherapy of Hepatocellular Carcinoma. Hong Kong Radiographer and Radiation Therapist Conference (HKRRTC) 2015, Hong Kong 26-28 Jun 2015.
10. Or KM, Kwong YP, Chow YH, Kwong CY, Keung HK, **Lee SWY**. Dosimetric impact of flattening-filter-free beams on IMRT planning of non-small-cell lung carcinoma. Hong Kong Radiographer and Radiation Therapist Conference (HKRRTC) 2015, Hong Kong 26-28 Jun 2015.
11. Lu YY, **Lee SWY**, Khaw KS, Du R. A Holographic Displaying System for Gastroscopy Diagnosis. MATEC Web of Conferences 2015; 32: 04003.
12. Lu YY, **Lee SWY**, Khaw KS, Du R. A 360-degree Holographic Display System for Radiotherapy Treatment Planning. *Proceedings of Computer-Aided Design 2015*; 455-58. *IF: 1.801*
13. Ngan Kee WD, **Lee SWY**, Khaw KS, Ng FF. Randomized evaluative study of phenylephrine or norepinephrine (The RESPOND study) for maintenance of blood pressure during spinal anaesthesia for Caesarean delivery. *Int J Obstet Anesth* 2014; 23(S1): S10. (*This paper was awarded the prize for the best paper at the Obstetric Anaesthetists Association meeting in May 2014*). *IF: 2.085 (Ranked 20th/31 among Anaesthesia Journals)*
14. **Lee SWY**, Khaw KS, Ngan Kee WD, Leung TY, Ho SSY, Ying MTC, Critchley LAH. A new bedside technique for detecting inferior vena cava compression in term parturients. *Anaesth Int Care* 2007; 35: 638. *IF: 1.47*
15. **Lee SWY**, Khaw KS, Ngan Kee WD, Leung TY, Ho SY, Ying TC, Critchley LAH. A new bedside technique for detecting inferior vena cava compression in term parturients. *Annual Scientific Meeting of the Australian and New Zealand College of Anaesthetists (ANZCA) 2007*, Melbourne Exhibition and Convention Centre 26th-29th May 2007.
16. **Lee SWY**, Khaw KS, Ngan Kee WD, Leung TY, Ho SY, Ying TC, Critchley LAH. Application of venous phasicity test for detecting inferior vena cava compression in term parturients. *The 3rd International Scientific Meeting of the International Society of Ultrasound in Obstetrics and Gynaecology (ISUOG) 2007*, Hong Kong Convention and Exhibition Centre 25th-28th February 2007.
17. **Lee SWY**, Khaw KS, Ngan Kee WD, Ying TC, Ho SY. A new method for detecting inferior vena cava compression in term parturients. *The Combined Scientific Meeting in Anaesthesiology 2006*, Hong Kong Convention and Exhibition Centre 18th-19th November 2006.
18. **Lee SWY**, Khaw KS, Ngan Kee WD, Ng B, Ng F, Critchley LAH. Haemodynamic monitoring during elective Caesarean section: the good, the bad and the ugly. *The Combined Scientific Meeting in Anaesthesiology 2005*, Hong Kong Convention and Exhibition Centre 27th-28th August 2005.
19. Khaw KS, **Lee SWY**, Ngan Kee WD, Ng F. Can Finometer provide rapid detection of hypotension during spinal anaesthesia for elective Caesarean section? *The Australian Society of Anaesthetists - 64th National Scientific Congress 2005*, Gold Coast Convention and Exhibition Centre 24th – 27th September 2005.

INTERNAL SERVICES

Department/Faculty

- Deputy Programme Leader for the degree of BSc (Hons) Radiography (August 2015 - Present)
- Programme Coordinator, BSc (Hons) Radiography (RT Specialism) (Nov 2020 - Present)
- Specialism Coordinator for the Doctor of Health Sciences (DHSc), The Hong Kong Polytechnic University (Jul 2020 – Present)
- Departmental representative, Task Force on Innovative Teaching Facilities, Faculty of Health & Social Sciences (Jul 2020 - Present)
- Radiography Infection control officer (Sep 2020 - Present)
- Undergraduate Departmental enrolment officer for BSc (Hons) Radiography (2014-16, 2021-23)
- Senate member, The Hong Kong Polytechnic University (2017 – 2019)
- Elected Member of the Departmental Management Committee (DMC) (September 2017-2019)

EXTERNAL SERVICES

- Chief Station Examiner for Part II Third Professional Examination (OSCE, Objective-structured Clinical Examination) for the degree of Bachelor of Medicine and Surgery (MBChB) of the Chinese University of Hong Kong (May 2013 – 2019)
- Invited examiner for PhD in Anaesthesia & Intensive Care of the Chinese University of Hong Kong
- External examiner (Dissertation) for the degree of Master of Medical Sciences (MMedSc) of the University of Hong Kong (2014 – Present)
- External examiner (Dissertation) for the degree of Doctor of Health Science (DHSc) of the Hong Kong Polytechnic University (2018)