

Curriculum Vitae

Professor Annette Haworth PhD FACPSEM

Director, Institute of Medical Physics, School of Physics, University of Sydney
Director, Radiation Oncology Medical Physics, Sydney West Radiation Oncology Network
Director, postgraduate Medical Physics programme, University of Sydney
The University of Sydney, NSW, 2006
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1. General Information

2023 – present: Conjoint role - Director, Radiation Oncology Medical Physics, Sydney West Radiation Oncology Network, Westmead and Blacktown Hospitals.

2016 – present: Professor, School of Physics, University of Sydney. Director of the Institute of Medical Physics and course director for the University of Sydney postgraduate Medical Physics programme.

Received ACPSEM accreditation in Radiotherapy Equipment and Commissioning 1994.

2. Tertiary Qualifications

2005 PhD, awarded with distinction, University of Western Australia. Subject of thesis: post implant dosimetry and evaluation of implant quality in I-125 prostate implants

1997 MSc by research, University of Western Australia. Subject of thesis: Investigation, dosimetry and optimisation of dose delivery techniques for total body irradiation

1981 BSc (Hons) in Physics, Leeds University (UK).

3. Career

Sept 2016 – present: Professor of Medical Physics, Director of Institute of Medical Physics, School of Physics, University of Sydney. Course director for postgraduate medical physics program.

2023 – present: Conjoint role - Director, Radiation Oncology Medical Physics, Sydney West Radiation Oncology Network, Westmead and Blacktown Hospitals.

2008-2018: Adjunct A/Professor (University of Melbourne, Faculty of Sir Peter MacCallum Dept of Oncology, University of Melbourne)

2006-2018: Adjunct A/Professor, RMIT University

Jan 06 – Aug 2016: Clinical Research Physicist (radiation oncology) and Academic Lead, Dept. Physical Sciences, Peter MacCallum Cancer Centre, Vic.

Dec 97 – Jan 06: Senior Radiotherapy Physicist, Department of Radiation Oncology, Sir Charles Gairdner Hospital, Perth, Western Australia. Supervisor: Mr Peter Lanzon

Sabbatical Leave: Sept. 1999 – Feb 2000: Time spent at: Gustave Roussy, Paris; Netherlands Cancer Institute, Amsterdam, The Netherlands; Cookridge Hospital, Leeds, England

Dec 89 - Dec 97: Radiotherapy Physicist. Department of Medical Physics, Royal Perth Hospital, Perth, Western Australia. Supervisor: Dr Adrian Perry.

Sep 85 - Dec 89: Medical Physicist, Department of Biophysics, Sir Charles Gairdner Hospital, Perth, Western Australia. Supervisor: Dr David Collins

4. Personal Statement

I am an ACPSEM certified medical physicists (Registration number R00005), accredited in Radiation Oncology Medical Physicist and have more than 25 years clinical and research experience. My PhD (awarded with distinction) involved development of bio-effect models in prostate cancer radiotherapy. After developing the first Australian program for prostate cancer therapy with permanently-implanted radioactive seeds, I maintained a focus on prostate cancer radiotherapy, and in 2010-2014 successfully lead a PdCCRS funded project to further develop the bioeffect model for focal brachytherapy, establish imaging protocols to extract data to inform the model and develop software to automate treatment planning for brachytherapy and external beam radiation therapy using the bio-effect model. I lead a research team with multiple national and international collaborations, 5 post-doctoral fellows and 12 PhD students. I have received several competitive grants including an NHMRC project grant (2016) to further the development of the “BiRT” project. The BiRT project will develop imaging biomarkers to provide quantitative tumour characteristic descriptors to inform a biological model for radiotherapy treatment planning and treatment response in multiple tumour site including prostate, liver, colorectal cancer and breast.

I have had significant involvement in the design, management and quality assurance of clinical trials. I am a Life Member of TROG, and member of the Board of Directors. I was a member of the Scientific Committee for 10 years and have led the QA program for several trials. I am the principal investigator for the SI-BiRT (sequential imaging in biofocussed radiotherapy) clinical trials (ANZCTR UTN U1111-1221-9589).

Since August 2023 I have taken on the conjoint role of Director, Radiation Oncology Medical Physics at Westmead and Blacktown Hospitals. The service provides a full range of high-quality radiation therapy treatments with a team that is actively engaged in further developing its reputation as a world leader in radiation oncology related research and development.

5. Media

<https://thepulse.org.au/2023/09/28/professor-annette-haworth-a-visionary-leader-for-radiation-oncology-in-western-sydney/>

<https://www.youtube.com/watch?v=27kxnmMR-dg>

<http://oncologynews.com.au/first-patient-receives-flattening-filter-free-sabr-treatment-at-peter-mac/>

<http://www.dailymail.co.uk/news/article-2913354/Trials-underway-cut-two-months-cancer-radiation-treatment-single-visit-just-TEN-minutes.html>

6. Book Chapters

1. Annette Haworth and Geoffrey Ibbot. Medical Physics for Clinical Trials. Modern Technology of Radiation Oncology, Volume 3 (Ed.: J Van Dyk) Chapter 15. Medical Physics Publishing, Wisconsin 2013, ISBN 978-1-930524-57-6, pp. 487-511. (e-version ISBN #9781930524668)
2. Tomas Kron and Annette Haworth (editors). Proceedings of the XVII International Conference on the Use of Computers in Radiation Therapy (ICCR 2013), 6–9 May 2013, Melbourne, Australia. Journal of Physics: Conference Series 489 (2014) - <http://iopscience.iop.org/1742-6596/489/1>
3. Wong JHD, Haworth A, Marques da Silva AM et al. Medical Physics During the COVID-19 Pandemic (Ed: KH Ng and MS Stoeva) Chapter 5. CRC Press 2021 , ISBN: 978-0-367-69375-6 pp. 36-46 <https://youtu.be/daGI1PJIEok>
4. IAEA Training Course series 56(Rev.1) Postgraduate Medical Physics Academic Programmes IAEA, Vienna, 2021 ISSN 1018–5518. Expert consultant for contribution and review. [https://www-pub.iaea.org/MTCD/publications/PDF/TCS-56_\(Rev.1\)web.pdf](https://www-pub.iaea.org/MTCD/publications/PDF/TCS-56_(Rev.1)web.pdf)

7. Published papers:

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1. Zhao Y, Haworth A, Rowshanfarzad P, Ebert MA. Focal Boost in Prostate Cancer Radiotherapy: A Review of Planning Studies and Clinical Trials. Cancers (Basel). 2023;15(19):1–28.
2. Davoudi F, Moradi A, Becker TM, Lock JG, Abbey B, Fontanarosa D, et al. Genomic and Phenotypic Biomarkers for Precision Medicine Guidance in Advanced Prostate Cancer. Curr Treat Options Oncol [Internet]. 2023;(0123456789). Available from: <https://doi.org/10.1007/s11864-023-01121-z>
3. Min H, Dowling J, Jameson MG, Cloak K, Faustino J, Sidhom M, et al. Clinical target volume delineation quality assurance for MRI-guided prostate radiotherapy using deep learning with uncertainty estimation. Radiother Oncol [Internet]. 2023;186:109794. Available from: <https://doi.org/10.1016/j.radonc.2023.109794>
4. Beaulieu L, Ballester F, Granero D, Carlsson Tedgren Å, Haworth A, Lowenstein J, et al. AAPM WGDCAB Report 372: A Joint AAPM, ESTRO, ABG and ABS Report on Commissioning of Model-Based Dose Calculation Algorithms in Brachytherapy. Med Phys. 2023;(MS #22AAPMSR-1652-T1 accepted for publication).
5. Claridge Mackonis ER, Hardcastle N, Haworth A. A survey of compliance with stereotactic ablative body radiotherapy quality recommendations. J Med Imaging Radiat Oncol [Internet]. 2023 Mar 30;1–9. Available from: <https://onlinelibrary.wiley.com/doi/10.1111/1754-9485.13526>
6. Chan TH, Haworth A, Wang A, Osanlouy M, Williams S, Mitchell C, et al. Detecting localised prostate cancer using radiomic features in PSMA PET and multiparametric MRI for biologically targeted radiation therapy. EJNMMI Res [Internet]. 2023;13(34):1–14. Available from: <https://doi.org/10.1186/s13550-023-00984-5>
7. Montazerolghaem M, Sun Y, Sasso G, Haworth A. U-Net Architecture for Prostate

- Segmentation: The Impact of Loss Function on System Performance. *Bioengineering* [Internet]. 2023 Mar 26;10(4):412. Available from: <https://www.mdpi.com/2306-5354/10/4/412>
8. Zhao Y, Haworth A, Reynolds HM, Her EJ, Sun Y, Finnegan R, et al. Patient-specific voxel-level dose prescription for prostate cancer radiotherapy considering tumor cell density and grade distribution. *Med Phys* [Internet]. 2023 Jun 15;50(6):3746–61. Available from: <https://aapm.onlinelibrary.wiley.com/doi/10.1002/mp.16264>
 9. Poder J, Rivard MJ, Howie A, Tedgren AC, Haworth A. Risk and Quality in Brachytherapy From a Technical Perspective Incidents in Brachytherapy e Human Factors. *Clin Oncol* [Internet]. 2023;(Jan 14):1–7. Available from: <https://doi.org/10.1016/j.clon.2023.01.001>
 10. Reynolds HM, Tadimalla S, Wang YF, Montazerolghaem M, Sun Y, Williams S, et al. Semi-quantitative and quantitative dynamic contrast-enhanced (DCE) MRI parameters as prostate cancer imaging biomarkers for biologically targeted radiation therapy. *Cancer Imaging* [Internet]. 2022;22(1):1–14. Available from: <https://doi.org/10.1186/s40644-022-00508-9>
 11. Tadimalla S, Wang W, Haworth A. Role of Functional MRI in Liver SBRT: Current Use and Future Directions. *Cancers (Basel)* [Internet]. 2022 Nov 28;14(23):5860. Available from: <https://www.mdpi.com/2072-6694/14/23/5860>
 12. Claridge Mackonis E, Sykes J, Hardcastle N, Espinoza A, Brown A, Perez G, et al. A comparison of in-house and shared RapidPlan models for prostate radiation therapy planning. *Phys Eng Sci Med* [Internet]. 2022;(0123456789). Available from: <https://doi.org/10.1007/s13246-022-01151-1>
 13. Gysen K Van, Kneebone A, Le A, Wu K, Haworth A, Bromley R, et al. Evaluating the utility of knowledge-based planning for clinical trials using the TROG 08 . 03 post prostatectomy radiation therapy planning data. *Phys Imaging Radiat Oncol* [Internet]. 2022;22(December 2021):91–7. Available from: <https://doi.org/10.1016/j.phro.2022.05.004>
 14. Pudsey L, Haworth A, White P, Moutrie Z, Jonker B, Foote M, et al. Current status of intra-cranial stereotactic radiotherapy and stereotactic radiosurgery in Australia and New Zealand: key considerations from a workshop and surveys. *Phys Eng Sci Med* [Internet]. 2022;45(1):251–9. Available from: <https://doi.org/10.1007/s13246-022-01108-4>
 15. Ebert MA, Marcello M, Kennedy A, Haworth A, Holloway LC, Greer P, et al. In Regard to Shortall et al. *Int J Radiat Oncol Biol Phys*. 2022;112(3):831–3.
 16. Finnegan RN, Reynolds HM, Ebert MA, Sun Y, Holloway L, Sykes JR, et al. A statistical, voxelised model of prostate cancer for biologically optimised radiotherapy. *Phys Imaging Radiat Oncol* [Internet]. 2022;21(September 2021):136–45. Available from: <https://doi.org/10.1016/j.phro.2022.02.011>
 17. Min H, Dowling J, Jameson MG, Cloak K, Faustino J, Sidhom M, et al. Automatic radiotherapy delineation quality assurance on prostate MRI with deep learning in a multicentre clinical trial. *Phys Med Biol* [Internet]. 2021 Oct 7;66(19):195008. Available from: <https://iopscience.iop.org/article/10.1088/1361-6560/ac25d5>
 18. Her EJ, Haworth A, Sun Y, Williams S, Reynolds HM, Kennedy A, et al. Biologically Targeted Radiation Therapy : Incorporating Patient-Specific Hypoxia Data Derived from Quantitative Magnetic Resonance Imaging. *Cancers (Basel)*. 2021;13(19):4897.
 19. Thwaites D, Moses D, Haworth A, Barton M, Holloway L. Artificial intelligence in medical imaging and radiation oncology: Opportunities and challenges. *J Med Imaging Radiat Oncol*

- [Internet]. 2021 Aug 2;65(5):481–5. Available from: <https://onlinelibrary.wiley.com/doi/10.1111/1754-9485.13275>
20. Chlap P, Min H, Vandenberg N, Dowling J, Holloway L, Haworth A. A review of medical image data augmentation techniques for deep learning applications. *J Med Imaging Radiat Oncol* [Internet]. 2021 Aug 19;65(5):545–63. Available from: <https://onlinelibrary.wiley.com/doi/10.1111/1754-9485.13261>
 21. Wang Y, Tadimalla S, Hayden AJ, Holloway L, Haworth A. Artificial intelligence and imaging biomarkers for prostate radiation therapy during and after treatment. *J Med Imaging Radiat Oncol* [Internet]. 2021 May 31;1754-9485.13242. Available from: <https://onlinelibrary.wiley.com/doi/10.1111/1754-9485.13242>
 22. Wang Y, Tadimalla S, Rai R, Goodwin J, Foster S, Liney G, et al. Quantitative MRI: Defining repeatability, reproducibility and accuracy for prostate cancer imaging biomarker development. *Magn Reson Imaging* [Internet]. 2021;77:169–79. Available from: <https://doi.org/10.1016/j.mri.2020.12.018>
 23. Her EJ, Ebert MA, Kennedy A, Reynolds HM, Sun Y, Williams S, et al. Standard versus hypofractionated intensity-modulated radiotherapy for prostate cancer: assessing the impact on dose modulation and normal tissue effects when using patient-specific cancer biology. *Phys Med Biol* [Internet]. 2021 Feb 21;66(4):045007. Available from: <http://iopscience.iop.org/article/10.1088/1361-6560/ab9354/pdf>
 24. Vozzo M, Poder J, Yuen J, Bucci J, Haworth A. Use of deformable image registration techniques to estimate dose to organs at risk following prostate external beam radiation therapy and high-dose-rate brachytherapy. *J Contemp Brachytherapy*. 2021;13(1):72–9.
 25. Di Re AM, Sun Y, Sundaresan P, Hau E, Toh JWT, Gee H, et al. MRI radiomics in the prediction of therapeutic response to neoadjuvant therapy for locoregionally advanced rectal cancer: a systematic review. *Expert Rev Anticancer Ther* [Internet]. 2021 Apr 3;21(4):425–49. Available from: <https://www.tandfonline.com/doi/full/10.1080/14737140.2021.1860762>
 26. Marcello M, Denham JW, Kennedy A, Haworth A, Steigler A, Greer PB, et al. Reduced Dose Posterior to Prostate Correlates With Increased PSA Progression in Voxel-Based Analysis of 3 Randomized Phase 3 Trials. *Int J Radiat Oncol Biol Phys*. 2020;108(5):1304–18.
 27. Her EJ, Haworth A, Reynolds HM, Sun Y, Kennedy A, Panettieri V, et al. Voxel-level biological optimisation of prostate IMRT using patient-specific tumour location and clonogen density derived from mpMRI. *Radiat Oncol* [Internet]. 2020 Dec 13;15(1):172. Available from: <https://ro-journal.biomedcentral.com/articles/10.1186/s13014-020-01568-6>
 28. Marcello M, Denham JW, Kennedy A, Haworth A, Steigler A, Greer PB, et al. Relationships between rectal and perirectal doses and rectal bleeding or tenesmus in pooled voxel-based analysis of 3 randomised phase III trials. *Radiother Oncol*. 2020;150:281–92.
 29. Claridge Mackonis ER, Hardcastle N, Haworth A. Stereotactic ablative body radiation therapy (SABR) in NSW. *Phys Eng Sci Med*. 2020;43(2):641–50.
 30. Joseph D, Denham JW, Steigler A, Lamb DS, Spry NA, Stanley J, et al. Radiation Dose Escalation or Longer Androgen Suppression to Prevent Distant Progression in Men With Locally Advanced Prostate Cancer : 10-Year Data From the TROG 03 . 04 RADAR Trial. *Int J Radiat Oncol Biol Phys*. 2020;106(4):693–702.
 31. Kneebone A, Fraser-browne C, Duchesne GM, Fisher R, Frydenberg M, Herschtal A, et al. Adjuvant radiotherapy versus early salvage radiotherapy following radical prostatectomy (

- TROG 08 . 03 / ANZUP RAVES): a randomised , controlled , phase 3 , non-inferiority trial. *Lancet Oncol.* 2020;21(October):1331–40.
32. Haworth A, Fielding AL, Marsh S, Rowshanfarzad P, Santos A, Metcalfe P, et al. Will COVID-19 change the way we teach medical physics post pandemic? *Phys Eng Sci Med [Internet]*. 2020;1:3. Available from: <https://rdcu.be/cpXkG>
 33. Marcello M, Denham JW, Kennedy A, Haworth A, Steigler A, Greer PB, et al. Increased Dose to Organs in Urinary Tract Associates With Measures of Genitourinary Toxicity in Pooled Voxel-Based Analysis of 3 Randomized Phase III Trials. *Front Oncol.* 2020;10(July):1174.
 34. Barber J, Yuen J, Jameson M, Schmidt L, Sykes J, Gray A, et al. Deforming to Best Practice : Key considerations for deformable image registration in radiotherapy. *J Med Radiat Sci.* 2020;67(4):318–32.
 35. Her EJ, Haworth A, Rowshanfarzad P, Ebert MA. Progress towards Patient-Specific, Spatially-Continuous Radiobiological Dose Prescription and Planning in Prostate Cancer IMRT : An Overview. *Cancers (Basel).* 2020;12(854):1–17.
 36. Poder J, Smith R, Haworth A. Low-dose-rate iodine-125 seed air kerma strength measurement intercomparison. *Brachytherapy.* 2020;19(1):119–25.
 37. Sun Y, Reynolds HM, Wraith D, Williams S, Finnegan ME, Mitchell C, et al. Automatic stratification of prostate tumour aggressiveness using multiparametric MRI: a horizontal comparison of texture features. *Acta Oncol (Madr) [Internet]*. 2019 Apr 17;1–9. Available from: <https://www.tandfonline.com/doi/full/10.1080/0284186X.2019.1598576>
 38. Sun Y, Williams S, Byrne D, Simon Keam S, Reynolds HM, Mitchell C, et al. Association analysis between quantitative MRI features and hypoxia-related genetic profiles in prostate cancer : a pilot study. *Br J Radiol.* 2019 Dec;92(1104):20190373.
 39. Cloak K, Jameson MG, Paneghel A, Wiltshire K, Kneebone A, Pearse M, et al. Contour variation is a primary source of error when delivering post prostatectomy radiotherapy: Results of the Trans-Tasman Radiation Oncology Group 08.03 Radiotherapy Adjuvant Versus Early Salvage (RAVES) benchmarking exercise. *J Med Imaging Radiat Oncol.* 2019 Jun;63(3):390–8.
 40. Bezak E, Suchowerska R, Claridge Mackonis E, Pillen H, Ralston A, Haworth A, et al. Women and men in the Australasian College of Physical Scientists and Engineers in Medicine: workforce survey. *Australas Phys Eng Sci Med [Internet]*. 2019 Mar 2;42(1):33–41. Available from: <http://link.springer.com/10.1007/s13246-018-0706-z>
 41. Haworth A, Sun Y, Ebert M, Reynolds H, Betts J, Wraith D, et al. Use of contemporary prostate brachytherapy approaches in clinical trials. In: *Journal of Physics: Conference Series.* 2019. p. 12010.
 42. Reynolds HM, Williams S, Jackson P, Mitchell C, Hofman MS, Hicks RJ, et al. Voxel-wise correlation of positron emission tomography/computed tomography with multiparametric magnetic resonance imaging and histology of the prostate using a sophisticated registration framework. *BJU Int [Internet]*. 2019 Jun;123(6):1020–30. Available from: <http://doi.wiley.com/10.1111/bju.14648>
 43. Sun Y, Reynolds HM, Parameswaran B, Wraith D, Finnegan ME, Williams S, et al. Multiparametric MRI and radiomics in prostate cancer: a review. *Australas Phys Eng Sci Med [Internet]*. 2019 Mar 14;42(1):3–25. Available from: <http://link.springer.com/10.1007/s13246-019-00730-z>

44. Her EJ, Reynolds HM, Mears C, Williams S, Moorehouse C, Millar JL, et al. Radiobiological parameters in a tumour control probability model for prostate cancer LDR brachytherapy. *Phys Med Biol* [Internet]. 2018 Jun 27;63(13):135011. Available from: <http://stacks.iop.org/0031-9155/63/i=13/a=135011?key=crossref.79953e1427f6e78d342adc1316f9fe0b>
45. Liu J, Dwyer T, Marriott K, Millar J, Haworth A. Understanding the Relationship Between Interactive Optimisation and Visual Analytics in the Context of Prostate Brachytherapy. *IEEE Trans Vis Comput Graph* [Internet]. 2018 Jan;24(1):319–29. Available from: <http://ieeexplore.ieee.org/document/8017652/>
46. Marcello M, Ebert MA, Haworth A, Steigler A, Kennedy A, Bulsara M, et al. Association between measures of treatment quality and disease progression in prostate cancer radiotherapy: An exploratory analysis from the TROG 03.04 RADAR trial. *J Med Imaging Radiat Oncol* [Internet]. 2018 Apr;62(2):248–55. Available from: <http://doi.wiley.com/10.1111/1754-9485.12695>
47. Marcello M, Ebert M, Haworth A, Steigler A, Kennedy A, Joseph D, et al. Association between treatment planning and delivery factors and disease progression in prostate cancer radiotherapy: Results from the TROG 03.04 RADAR trial. *Radiother Oncol* [Internet]. 2018 Feb;126(2):249–56. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0167814017326610>
48. Smith RL, Hanlon M, Panettieri V, Millar JL, Matheson B, Haworth A, et al. An integrated system for clinical treatment verification of HDR prostate brachytherapy combining source tracking with pretreatment imaging. *Brachytherapy* [Internet]. 2018 Jan;17(1):111–21. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S1538472117304269>
49. Sun Y, Reynolds HM, Wraith D, Williams S, Finnegan ME, Mitchell C, et al. Voxel-wise prostate cell density prediction using multiparametric magnetic resonance imaging and machine learning. *Acta Oncol (Madr)* [Internet]. 2018 Nov 2;57(11):1540–6. Available from: <https://www.tandfonline.com/doi/full/10.1080/0284186X.2018.1468084>
50. Antony R, Herschtal A, Todd S, Phillips C, Haworth A. A pilot study on geometrical uncertainties for intra ocular cancers in radiotherapy. *Australas Phys Eng Sci Med* [Internet]. 2017 Jun 2;40(2):433–9. Available from: <http://link.springer.com/10.1007/s13246-017-0551-5>
51. Betts JM, Mears C, Reynolds HM, Ebert MA, Haworth A. Prostate cancer focal brachytherapy: Improving treatment plan robustness using a convolved dose rate model. In: *Procedia Computer Science*. 2017. p. 1522–31.
52. Ghasab MAJ, Paplinski AP, Betts JM, Reynolds HM, Haworth A. Automatic 3D modelling for prostate cancer brachytherapy. In: *2017 IEEE International Conference on Image Processing (ICIP)* [Internet]. IEEE; 2017. p. 4452–6. Available from: <http://ieeexplore.ieee.org/document/8297124/>
53. Haworth A, Williams S. Focal therapy for prostate cancer: the technical challenges. *J Contemp Brachytherapy* [Internet]. 2017;4(4):383–9. Available from: <https://www.termedia.pl/doi/10.5114/jcb.2017.69809>
54. Hussein M, Clementel E, Eaton DJ, Greer PB, Haworth A, Ishikura S, et al. A virtual dosimetry audit – Towards transferability of gamma index analysis between clinical trial QA groups. *Radiother Oncol* [Internet]. 2017 Dec;125(3):398–404. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S016781401732652X>

55. Kron T, Ungureanu E, Antony R, Hardcastle N, Clements N, Ukath J, et al. Patient specific quality control for Stereotactic Ablative Body Radiotherapy (SABR): it takes more than one phantom. *J Phys Conf Ser* [Internet]. 2017 Jan;777(1):012017. Available from: <http://stacks.iop.org/1742-6596/777/i=1/a=012017?key=crossref.bd4d86eaedb6cbeb1a90962b56cdfd6>
56. Ma Y, Vijande J, Ballester F, Tedgren ÅC, Granero D, Haworth A, et al. A generic TG-186 shielded applicator for commissioning model-based dose calculation algorithms for high-dose-rate 192 Ir brachytherapy. *Med Phys* [Internet]. 2017 Nov;44(11):5961–76. Available from: <http://doi.wiley.com/10.1002/mp.12459>
57. Poder J, Smith RL, Shelton N, Whitaker M, Butler D, Haworth A. High dose rate brachytherapy source measurement intercomparison. *Australas Phys Eng Sci Med* [Internet]. 2017 Jun 24;40(2):377–83. Available from: <http://link.springer.com/10.1007/s13246-017-0542-6>
58. Smith RL, Haworth A, Panettieri V, Millar JL, Franich RD. 3D catheter reconstruction in HDR prostate brachytherapy for pre-treatment verification using a flat panel detector. *Phys Medica* [Internet]. 2017 Jul;39:121–31. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S1120179717301965>
59. Sun Y, Reynolds H, Wraith D, Williams S, Finnegan ME, Mitchell C, et al. Predicting prostate tumour location from multiparametric MRI using Gaussian kernel support vector machines: a preliminary study. *Australas Phys Eng Sci Med* [Internet]. 2017 Mar 24;40(1):39–49. Available from: <http://link.springer.com/10.1007/s13246-016-0515-1>
60. Duchesne GM, Haworth A, Bone E, Carter H, Ebert MA, Gagliardi F, et al. Testing the Assessment of New Radiation Oncology Technology and Treatments framework using the evaluation of post-prostatectomy radiotherapy techniques. *J Med Imaging Radiat Oncol* [Internet]. 2016 Feb;60(1):129–37. Available from: <http://doi.wiley.com/10.1111/1754-9485.12390>
61. Hardcastle N, Oborn BM, Haworth A. On the use of a convolution-superposition algorithm for plan checking in lung stereotactic body radiation therapy. *J Appl Clin Med Phys* [Internet]. 2016 Sep;17(5):99–110. Available from: <http://doi.wiley.com/10.1120/jacmp.v17i5.6186>
62. Haworth A. Which patients benefit from post-implant CT dosimetry after real-time intraoperative planning for LDR prostate brachytherapy: Should intraoperatively planned patients be treated differently? *J Med Imaging Radiat Oncol* [Internet]. 2016 Apr;60(2):244–6. Available from: <http://doi.wiley.com/10.1111/1754-9485.12445>
63. Haworth A. Brachytherapy: a dying art or missed opportunity? *Australas Phys Eng Sci Med* [Internet]. 2016 Mar 10;39(1):5–9. Available from: <http://link.springer.com/10.1007/s13246-016-0430-5>
64. Haworth A, Mears C, Betts JM, Reynolds HM, Tack G, Leo K, et al. A radiobiology-based inverse treatment planning method for optimisation of permanent I-125 prostate implants in focal brachytherapy. *Phys Med Biol* [Internet]. 2016 Jan 7;61(1):430–44. Available from: <http://stacks.iop.org/0031-9155/61/i=1/a=430?key=crossref.53307d045b373bd330c416290e1d0d73>
65. Smith RL, Haworth A, Panettieri V, Millar JL, Franich RD. A method for verification of treatment delivery in HDR prostate brachytherapy using a flat panel detector for both imaging and source tracking. *Med Phys* [Internet]. 2016 Apr 20;43(5):2435–42. Available from: <http://doi.wiley.com/10.1118/1.4946820>
66. Taylor ML, Yeo UA, Supple J, Keehan S, Siva S, Kron T, et al. The Importance of Quasi-4D Path-

- Integrated Dose Accumulation for More Accurate Risk Estimation in Stereotactic Liver Radiotherapy. *Technol Cancer Res Treat* [Internet]. 2016 Jun 20;15(3):428–36. Available from: <http://journals.sagepub.com/doi/10.1177/1533034615584120>
67. Wilson C, Waterhouse D, Lane SE, Haworth A, Stanley J, Shannon T, et al. Ten-year outcomes using low dose rate brachytherapy for localised prostate cancer: An update to the first Australian experience. *J Med Imaging Radiat Oncol* [Internet]. 2016 Aug;60(4):531–8. Available from: <http://doi.wiley.com/10.1111/1754-9485.12453>
 68. Ballester F, Carlsson Tedgren Å, Granero D, Haworth A, Mourtada F, Fonseca GP, et al. A generic high-dose rate 192 Ir brachytherapy source for evaluation of model-based dose calculations beyond the TG-43 formalism. *Med Phys*. 2015 May;42(6Part1):3048–62.
 69. Betts JM, Mears C, Reynolds HM, Tack G, Leo K, Ebert MA, et al. Optimised Robust Treatment Plans for Prostate Cancer Focal Brachytherapy. *Procedia Comput Sci* [Internet]. 2015;51(1):914–23. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S1877050915010339>
 70. Brown E, Cray A, Haworth A, Chander S, Lin R, Subramanian B, et al. Dose planning objectives in anal canal cancer IMRT: the TROG ANROTAT experience. *J Med Radiat Sci* [Internet]. 2015 Jun;62(2):99–107. Available from: <http://doi.wiley.com/10.1002/jmrs.99>
 71. Denham JW, Steigler A, Joseph D, Lamb DS, Spry NA, Duchesne G, et al. Radiation dose escalation or longer androgen suppression for locally advanced prostate cancer? Data from the TROG 03.04 RADAR trial. *Radiother Oncol* [Internet]. 2015 Jun;115(3):301–7. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0167814015002698>
 72. DiFranco MD, Reynolds HM, Mitchell C, Williams S, Allan P, Haworth A. Performance assessment of automated tissue characterization for prostate H and E stained histopathology. In: Gurcan MN, Madabhushi A, editors. *Progress in Biomedical Optics and Imaging - Proceedings of SPIE* [Internet]. 2015. p. 94200M. Available from: <http://proceedings.spiedigitallibrary.org/proceeding.aspx?doi=10.1117/12.2081787>
 73. Duchesne GM, Grand M, Kron T, Haworth A, Corry J, Jackson M, et al. Trans Tasman Radiation Oncology Group: Development of the Assessment of New Radiation Oncology Technology and Treatments (ANROTAT) Framework. *J Med Imaging Radiat Oncol* [Internet]. 2015 Jun;59(3):363–70. Available from: <http://doi.wiley.com/10.1111/1754-9485.12255>
 74. Ebert MA, Foo K, Haworth A, Gulliford SL, Kennedy A, Joseph DJ, et al. Gastrointestinal Dose-Histogram Effects in the Context of Dose-Volume-Constrained Prostate Radiation Therapy: Analysis of Data From the RADAR Prostate Radiation Therapy Trial. *Int J Radiat Oncol* [Internet]. 2015 Mar;91(3):595–603. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S036030161404396X>
 75. Ebert MA, Bulsara M, Haworth A, Kearvell R, Richardson S, Kennedy A, et al. Technical quality assurance during the TROG 03.04 RADAR prostate radiotherapy trial: Are the results reflected in observed toxicity rates? *J Med Imaging Radiat Oncol* [Internet]. 2015 Feb;59(1):99–108. Available from: <http://doi.wiley.com/10.1111/1754-9485.12212>
 76. Reynolds HM, Williams S, Zhang A, Chakravorty R, Rawlinson D, Ong CS, et al. Development of a registration framework to validate MRI with histology for prostate focal therapy. *Med Phys* [Internet]. 2015 Nov 19;42(12):7078–89. Available from: <http://doi.wiley.com/10.1118/1.4935343>
 77. Trada Y, Kneebone A, Paneghel A, Pearse M, Sidhom M, Tang C, et al. Optimizing Radiation Therapy Quality Assurance in Clinical Trials: A TROG 08.03 RAVES Substudy. *Int J Radiat Oncol*

- [Internet]. 2015 Dec;93(5):1045–51. Available from:
<https://linkinghub.elsevier.com/retrieve/pii/S0360301615031843>
78. Weingant M, Reynolds HM, Haworth A, Mitchell C, Williams S, DiFranco MD. Ensemble Prostate Tumor Classification in H&E Whole Slide Imaging via Stain Normalization and Cell Density Estimation. In: Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) [Internet]. 2015. p. 280–7. Available from: http://link.springer.com/10.1007/978-3-319-24888-2_34
 79. Yahya N, Ebert MA, Bulsara M, Haworth A, Kennedy A, Joseph DJ, et al. Dosimetry, clinical factors and medication intake influencing urinary symptoms after prostate radiotherapy: An analysis of data from the RADAR prostate radiotherapy trial. *Radiother Oncol* [Internet]. 2015 Jul;116(1):112–8. Available from:
<https://linkinghub.elsevier.com/retrieve/pii/S0167814015002935>
 80. Carolan M, Oborn B, Foo K, Haworth A, Gulliford S, Ebert M. An MLE method for finding LKB NTCP model parameters using Monte Carlo uncertainty estimates. In: *Journal of Physics: Conference Series* [Internet]. 2014. p. 012087. Available from: <http://stacks.iop.org/1742-6596/489/i=1/a=012087?key=crossref.181b59106e0d253de74e704220e16c36>
 81. Carter HE, Martin A, Schofield D, Duchesne G, Haworth A, Hornby C, et al. A decision model to estimate the cost-effectiveness of intensity modulated radiation therapy (IMRT) compared to three dimensional conformal radiation therapy (3DCRT) in patients receiving radiotherapy to the prostate bed. *Radiother Oncol* [Internet]. 2014 Aug;112(2):187–93. Available from:
<https://linkinghub.elsevier.com/retrieve/pii/S0167814014001637>
 82. Ebert MA, Foo K, Haworth A, Gulliford SL, Kearvall R, Kennedy A, et al. Derivation and representation of dose-volume response from large clinical trial data sets: an example from the RADAR prostate radiotherapy trial. *J Phys Conf Ser* [Internet]. 2014 Mar 24;489(1):012090. Available from: <http://stacks.iop.org/1742-6596/489/i=1/a=012090?key=crossref.9dd1c7d6e6213417653b035f5286dae2>
 83. Ebert MA, Gulliford SL, Buettner F, Foo K, Haworth A, Kennedy A, et al. Two non-parametric methods for derivation of constraints from radiotherapy dose–histogram data. *Phys Med Biol* [Internet]. 2014 Jul 7;59(13):N101–11. Available from: <http://stacks.iop.org/0031-9155/59/i=13/a=N101?key=crossref.b08a81a7ff4aaa85b51dfb1a6a859965>
 84. Haworth A, Kron T. XVII International Conference on the Use of Computers in Radiation Therapy (ICCR 2013). In: *Journal of Physics: Conference Series* [Internet]. 2014. p. 011001. Available from: <http://stacks.iop.org/1742-6596/489/i=1/a=011001?key=crossref.ba2c12af7ab8cd0fc1c7c5a21a487ab4>
 85. Haworth A, Paneghel A, Bressel M, Herschtal A, Pham D, Tai KH, et al. Prostate Bed Radiation Therapy: The Utility of Ultrasound Volumetric Imaging of the Bladder. *Clin Oncol* [Internet]. 2014 Dec;26(12):789–96. Available from:
<https://linkinghub.elsevier.com/retrieve/pii/S0936655514003276>
 86. Melidis C, Bosch WR, Izewska J, Fidarova E, Zubizarreta E, Ulin K, et al. Global Harmonization of Quality Assurance Naming Conventions in Radiation Therapy Clinical Trials. *Int J Radiat Oncol* [Internet]. 2014 Dec;90(5):1242–9. Available from:
<https://linkinghub.elsevier.com/retrieve/pii/S0360301614040553>
 87. Pearse M, Fraser-Browne C, Davis ID, Duchesne GM, Fisher R, Frydenberg M, et al. A Phase III trial to investigate the timing of radiotherapy for prostate cancer with high-risk features: background and rationale of the Radiotherapy - Adjuvant Versus Early Salvage (RAVES) trial. *BJU Int* [Internet]. 2014 Mar;113(SUPPL. 2):7–12. Available from:

<http://doi.wiley.com/10.1111/bju.12623>

88. Reynolds HM, Williams S, Zhang AM, Ong CS, Rawlinson D, Chakravorty R, et al. Cell density in prostate histopathology images as a measure of tumor distribution. In: Gurcan MN, Madabhushi A, editors. *Progress in Biomedical Optics and Imaging - Proceedings of SPIE* [Internet]. 2014. p. 90410S. Available from: <http://proceedings.spiedigitallibrary.org/proceeding.aspx?doi=10.1117/12.2043360>
89. Yahya N, Ebert MA, Bulsara M, Haworth A, Kearvell R, Foo K, et al. Impact of treatment planning and delivery factors on gastrointestinal toxicity: an analysis of data from the RADAR prostate radiotherapy trial. *Radiat Oncol* [Internet]. 2014 Dec 13;9(1):282. Available from: <https://ro-journal.biomedcentral.com/articles/10.1186/s13014-014-0282-7>
90. Dempsey C, Smith R, Nyathi T, Ceylan A, Howard L, Patel V, et al. ACPSEM brachytherapy working group recommendations for quality assurance in brachytherapy. *Australas Phys Eng Sci Med* [Internet]. 2013 Dec 12;36(4):387–96. Available from: <http://link.springer.com/10.1007/s13246-013-0228-7>
91. Foo K, Ebert MA, Carolan MG, Haworth A, Bulsara M, Joseph D, et al. TU-G-108-06: Anatomical Localization of Late Rectal Toxicity Predictors in Prostate Radiotherapy. In: *Medical Physics* [Internet]. 2013. p. 454–454. Available from: <http://doi.wiley.com/10.1118/1.4815455>
92. Haworth A, Butler DJ, Wilfert L, Ebert MA, Todd SP, Hayton AJM, et al. Comparison of TLD calibration methods for ¹⁹²Ir dosimetry. *J Appl Clin Med Phys* [Internet]. 2013 Jan;14(1):258–72. Available from: <http://doi.wiley.com/10.1120/jacmp.v14i1.4037>
93. Haworth A, Wilfert L, Butler D, Ebert MA, Todd S, Bucci J, et al. Australasian brachytherapy audit: Results of the ‘end-to-end’ dosimetry pilot study. *J Med Imaging Radiat Oncol* [Internet]. 2013 Aug;57(4):490–8. Available from: <http://doi.wiley.com/10.1111/1754-9485.12042>
94. Haworth A, Williams S, Reynolds H, Waterhouse D, Duchesne GM, Bucci J, et al. Validation of a radiobiological model for low-dose-rate prostate boost focal therapy treatment planning. *Brachytherapy* [Internet]. 2013 Nov;12(6):628–36. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S1538472113002754>
95. Ibbott GS, Haworth A, Followill DS. Quality Assurance for Clinical Trials. *Front Oncol* [Internet]. 2013;3:311. Available from: <http://journal.frontiersin.org/article/10.3389/fonc.2013.00311/abstract>
96. Kearvell R, Haworth A, Ebert MA, Murray J, Hooton B, Richardson S, et al. Quality improvements in prostate radiotherapy: Outcomes and impact of comprehensive quality assurance during the TROG 03.04 ‘RADAR’ trial. *J Med Imaging Radiat Oncol* [Internet]. 2013 Apr;57(2):247–57. Available from: <http://doi.wiley.com/10.1111/1754-9485.12025>
97. Kron T, Haworth A, Williams I. Dosimetry for audit and clinical trials: challenges and requirements. In: *Journal of Physics: Conference Series* [Internet]. 2013. p. 012014. Available from: <http://stacks.iop.org/1742-6596/444/i=1/a=012014?key=crossref.97ad646bc6f5008277651fbc38751694>
98. Papagiannis P, Ballester F, Tedgren AC, Haworth A, Ibbott G, Mourtada F, et al. SU-E-T-509: DICOM Test Case Plans for Model-Based Dose Calculations Methods in Brachytherapy. In: *Medical Physics* [Internet]. 2013. p. 322–322. Available from: <http://doi.wiley.com/10.1118/1.4814938>

99. Smith RL, Taylor ML, McDermott LN, Haworth A, Millar JL, Franich RD. Source position verification and dosimetry in HDR brachytherapy using an EPID. *Med Phys* [Internet]. 2013 Oct 8;40(11):111706. Available from: <http://doi.wiley.com/10.1118/1.4823758>
100. Ebert MA, McDermott LN, Haworth A, van der Wath E, Hooton B. Tools to analyse and display variations in anatomical delineation. *Australas Phys Eng Sci Med* [Internet]. 2012 Jun 12;35(2):159–64. Available from: <http://link.springer.com/10.1007/s13246-012-0136-2>
101. Foroudi F, Wilson L, Bressel M, Haworth A, Hornby C, Pham D, et al. A dosimetric comparison of 3D conformal vs intensity modulated vs volumetric arc radiation therapy for muscle invasive bladder cancer. *Radiat Oncol* [Internet]. 2012 Dec 23;7(1):111. Available from: <https://ro-journal.biomedcentral.com/articles/10.1186/1748-717X-7-111>
102. Mak D, Gill S, Paul R, Stillie A, Haworth A, Kron T, et al. Seminal vesicle interfraction displacement and margins in image guided radiotherapy for prostate cancer. *Radiat Oncol* [Internet]. 2012 Dec 13;7(1):139. Available from: <https://ro-journal.biomedcentral.com/articles/10.1186/1748-717X-7-139>
103. Nguyen BT, Hornby C, Kron T, Cramb J, Rolfo A, Pham D, et al. Optimising the dosimetric quality and efficiency of post-prostatectomy radiotherapy: A planning study comparing the performance of volumetric-modulated arc therapy (VMAT) with an optimised seven-field intensity-modulated radiotherapy (IMRT) technique. *J Med Imaging Radiat Oncol* [Internet]. 2012 Apr;56(2):211–9. Available from: <http://doi.wiley.com/10.1111/j.1754-9485.2011.02324.x>
104. Senthil S, Gill SS, Haworth A, Kron T, Cramb J, Rolfo A, et al. Benchmarking Dosimetric Quality Assessment of Prostate Intensity-Modulated Radiotherapy. *Int J Radiat Oncol* [Internet]. 2012 Feb;82(2):998–1005. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0360301610037181>
105. Foroudi F, Wong J, Kron T, Rolfo A, Haworth A, Roxby P, et al. Online Adaptive Radiotherapy for Muscle-Invasive Bladder Cancer: Results of a Pilot Study. *Int J Radiat Oncol* [Internet]. 2011 Nov;81(3):765–71. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0360301610009466>
106. Fox CD, Kron T, Leahy M, Duchesne G, Williams S, Tai KH, et al. Interfraction patient motion and implant displacement in prostate high dose rate brachytherapy. *Med Phys* [Internet]. 2011 Oct 11;38(11):5838–43. Available from: <http://doi.wiley.com/10.1118/1.3641865>
107. Hayton A, Haworth A, Waterhouse D, Todd S, Pillainayagam J. Lack of backscatter factor measurements in HDR applications with MOSkins. *Australas Phys Eng Sci Med* [Internet]. 2011 Dec 4;34(4):545–52. Available from: <http://link.springer.com/10.1007/s13246-011-0101-5>
108. Roozen K, Kron T, Haworth A, Franich R. Evaluation of EBT radiochromic film using a multiple exposure technique. *Australas Phys Eng Sci Med* [Internet]. 2011 Jun 23;34(2):281–9. Available from: <http://link.springer.com/10.1007/s13246-011-0067-3>
109. Ebert MA, Haworth A, Kearvell R, Hooton B, Hug B, Spry NA, et al. Comparison of DVH data from multiple radiotherapy treatment planning systems. *Phys Med Biol* [Internet]. 2010 Jun 7;55(11):N337–46. Available from: <http://stacks.iop.org/0031-9155/55/i=11/a=N04?key=crossref.88f0645c63d6b70d8f67b4bd4e4689be>
110. Foroudi F, Wong J, Kron T, Roxby P, Haworth A, Bailey A, et al. Development and evaluation of a training program for therapeutic radiographers as a basis for online adaptive radiation therapy for bladder carcinoma. *Radiography* [Internet]. 2010 Feb;16(1):14–20. Available

from: <https://linkinghub.elsevier.com/retrieve/pii/S1078817409000704>

111. Kron T, Thomas J, Fox C, Thompson A, Owen R, Herschtal A, et al. Intra-fraction prostate displacement in radiotherapy estimated from pre- and post-treatment imaging of patients with implanted fiducial markers. *Radiother Oncol* [Internet]. 2010 May;95(2):191–7. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0167814010000617>
112. Foroudi F, Haworth A, Pangehel A, Wong J, Roxby P, Duchesne G, et al. Inter-observer variability of clinical target volume delineation for bladder cancer using CT and cone beam CT. *J Med Imaging Radiat Oncol* [Internet]. 2009 Feb;53(1):100–6. Available from: <http://doi.wiley.com/10.1111/j.1754-9485.2009.02044.x>
113. Foroudi F, Wong J, Haworth A, Baille A, McAlpine J, Rolfo A, et al. Offline adaptive radiotherapy for bladder cancer using cone beam computed tomography. *J Med Imaging Radiat Oncol* [Internet]. 2009 Apr;53(2):226–33. Available from: <http://doi.wiley.com/10.1111/j.1754-9485.2009.02066.x>
114. Haworth A, Paneghel A, Herschtal A, Duchesne G, Williams S, Tai K, et al. Verification of target position in the post-prostatectomy cancer patient using cone beam CT. *J Med Imaging Radiat Oncol* [Internet]. 2009 Apr;53(2):212–20. Available from: <http://doi.wiley.com/10.1111/j.1754-9485.2009.02057.x>
115. Haworth A, Kearvell R, Greer PB, Hooton B, Denham JW, Lamb D, et al. Assuring high quality treatment delivery in clinical trials – Results from the Trans-Tasman Radiation Oncology Group (TROG) study 03.04 “RADAR” set-up accuracy study. *Radiother Oncol* [Internet]. 2009 Mar;90(3):299–306. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0167814008005410>
116. Kron T, Thomas J, Fox C, Thompson A, Owen R, Herschtal A, et al. Obtaining information on intra-fraction prostate displacement in radiotherapy determined from pre- and post-treatment kV imaging. In: *IFMBE Proceedings*. 2009. p. 535–8.
117. Roxby P, Kron T, Foroudi F, Haworth A, Fox C, Mullen A, et al. Simple methods to reduce patient dose in a Varian cone beam CT system for delivery verification in pelvic radiotherapy. *Br J Radiol* [Internet]. 2009 Oct;82(982):855–9. Available from: <http://www.birpublications.org/doi/10.1259/bjr/37579222>
118. Stillie AL, Kron T, Fox C, Herschtal A, Haworth A, Thompson A, et al. Rectal Filling at Planning Does Not Predict Stability of the Prostate Gland during a Course of Radical Radiotherapy if Patients with Large Rectal Filling are Re-imaged. *Clin Oncol* [Internet]. 2009 Dec;21(10):760–7. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S093665550900274X>
119. Tran P, Haworth A, Foroudi F, Paneghel A, Herschtal A, Tai K, et al. Prospective development of an individualised predictive model for treatment coverage using offline cone beam computed tomography surrogate measures in post-prostatectomy radiotherapy. *J Med Imaging Radiat Oncol* [Internet]. 2009 Dec;53(6):574–80. Available from: <http://doi.wiley.com/10.1111/j.1754-9485.2009.02126.x>
120. Willis D, Fox C, Haworth A, Rolfo A, Herschtal A, Kron T. Megavoltage versus kilovoltage image guidance for efficiency and accuracy in head and neck IMRT. *J Radiother Pract* [Internet]. 2009 Dec 1;8(4):177–84. Available from: https://www.cambridge.org/core/product/identifier/S1460396909990045/type/journal_article
121. Willis DJ, Kron T, Hubbard P, Haworth A, Wheeler G, Duchesne GM. Online Kidney Position Verification Using Non-Contrast Radiographs on a Linear Accelerator with on Board KV X-Ray

- Imaging Capability. *Med Dosim* [Internet]. 2009 Dec;34(4):293–300. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0958394708001726>
122. Butler D, Haworth A, Sander T, Todd S. Comparison of ¹⁹²Ir air kerma calibration coefficients derived at ARPANSA using the interpolation method and at the National Physical Laboratory using a direct measurement. *Australas Phys Eng Sci Med* [Internet]. 2008 Dec;31(4):332–8. Available from: <http://link.springer.com/10.1007/BF03178603>
 123. Ebert MA, Haworth A, Kearvell R, Hooton B, Coleman R, Spry N, et al. Detailed review and analysis of complex radiotherapy clinical trial planning data: Evaluation and initial experience with the SWAN software system. *Radiother Oncol* [Internet]. 2008 Feb;86(2):200–10. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0167814007005622>
 124. Haworth A, Ebert M, St. Clair S, Carey BM, Flynn A, Bottomley DM, et al. Impact of selection of post-implant technique on dosimetry parameters for permanent prostate implants. *Brachytherapy* [Internet]. 2005 Jan;4(2):146–53. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S1538472105000395>
 125. Ebert MA, Blight J, Price S, Haworth A, Hamilton C, Cornes D, et al. Multicentre analysis of treatment planning information: Technical requirements, possible applications and a proposal. *Australas Radiol* [Internet]. 2004 Sep;48(3):347–52. Available from: <http://doi.wiley.com/10.1111/j.1440-1673.2004.01291.x>
 126. Haworth A, Ebert M, Waterhouse D, Joseph D, Duchesne G. Assessment of ¹²⁵I prostate implants by tumor bioeffect. *Int J Radiat Oncol* [Internet]. 2004 Aug;59(5):1405–13. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0360301604002196>
 127. Haworth A, Ebert M, Waterhouse D, Joseph D, Duchesne G. Prostate implant evaluation using tumour control probability—the effect of input parameters. *Phys Med Biol* [Internet]. 2004 Aug 21;49(16):3649–64. Available from: <http://stacks.iop.org/0031-9155/49/i=16/a=012?key=crossref.8829808712a5739fdc47a05c84a0e526>
 128. Joseph DJ, Bydder S, Jackson LR, Corica T, Hastrich DJ, Oliver DJ, et al. Prospective trial of intraoperative radiation treatment for breast cancer. *ANZ J Surg* [Internet]. 2004 Dec;74(12):1043–8. Available from: <http://doi.wiley.com/10.1111/j.1445-1433.2004.03264.x>
 129. Joseph DJ, CS Woo T, Haworth A. Iodine-125 brachytherapy for prostate cancer: First published Australian experience. *Australas Radiol* [Internet]. 2004 Jun;48(2):181–7. Available from: <http://doi.wiley.com/10.1111/j.1440-1673.2004.01294.x>
 130. Skala M, Berry M, Duchesne G, Gogna K, Tai K-H, Turner S, et al. Australian and New Zealand three-dimensional conformal radiation therapy consensus guidelines for prostate cancer. *Australas Radiol* [Internet]. 2004 Dec;48(4):493–501. Available from: <http://doi.wiley.com/10.1111/j.1440-1673.2004.01354.x>
 131. Ebert MA, Carruthers B, Lanzon PJ, Haworth A, Clarke J, Caswell NM, et al. Dosimetry of a low-kV intra-operative X-ray source using basic analytical beam models. *Australas Phys Eng Sci Med* [Internet]. 2002 Sep;25(3):119–23. Available from: <http://link.springer.com/10.1007/BF03178772>
 132. Haworth A, Ebert M, Joseph D, Kaye KW. Registration of prostate volume with radiographically identified iodine-125 seeds for permanent implant evaluation. *J Brachytherapy Int*. 2000;16(3):157–67.
 133. Fox RA, Haworth A, Mina LL. The use of anisotropic data in ¹²⁵I prostate implants. *Australas Phys Eng Sci Med*. 1997;20(2):57–63.

134. Haworth A, Perry AM. Data acquisition for linac based stereotactic radiosurgery. *Australas Phys Eng Sci Med.* 1993;16(1):49–56.