



## CRUK RadNet Leeds publications (RadNet 2: from November 2024)

Aldridge J, Young C, Tiernan J, Quyn A, Tolan D, Jenkins JT, et al. A standardised approach to the pathological dissection and reporting of pelvic exenteration specimens: Recommendations from the UK Pelvic Exenteration Network (UKPEN). *Colorectal Dis.* 2026;28:e70433. <https://doi.org/10.1111/codi.70433>

Alzahrani NM, Henry AM, Al-Qaisieh BM, Murray LJ, Nix MG. Automated confidence estimation in deep learning auto-segmentation for brain organs at risk on MRI for radiotherapy. *J Appl Clin Med Phys.* 2024 Dec;25(12):e14513. doi: 10.1002/acm2.14513. Epub 2024 Sep 16. PMID: 39284283; PMCID: PMC11633808.

Appelt AL, Andrzejewski P, Hoffmann L, Kelly C, Michailidou C, Murrell DH, Pagett CJ, Portik D, Rønde HS, Serban M, Solomou N, Thompson C, Vasquez Osorio E, West NS, Zaila A, Popovic M. Cumulative dose evaluation in clinical reirradiation - Consensus guidance on technical considerations by the ESTRO reirradiation focus group. *Radiother Oncol.* 2025 Nov 27;214:111313. doi: 10.1016/j.radonc.2025.111313. Epub ahead of print. PMID: 41318002.

Beasley MR, Henry AM, Bestall J, Cosgrove VP, Murray LJ, Burnett C. Non-medicinal oral contrast in upper abdominal MRI for MR-guided radiotherapy: A scoping review. *Radiography (Lond).* 2025 Mar;31(2):102868. doi: 10.1016/j.radi.2025.01.003. Epub 2025 Jan 24. PMID: 39863498; PMCID: PMC11904122.

C.J.H. Pagett, J. Lilley, C. O'Hara, A. Appelt, L. Murray, R. Bokrantz, J. Ödén, S.Svensson, M. Harrison, P. Camilleri, R. Muirhead, M. Robinson, C. Thompson, Isotoxic stereotactic reirradiation for recurrent pelvic cancers, *Physics and Imaging in Radiation Oncology (2025)*, doi:<https://doi.org/10.1016/j.phro.2025.100889>

Callaghan JP, Jarrett R, Westwood AC, Laye J, Quirke P, Magee DR, Bottomley D, Sebag-Montefiore D, Thompson L, Meade A, Grabsch HI, West NP. Tumour-Infiltrating Lymphocytes, Tumour Cell Density, and Response to Neoadjuvant Short-Course Radiotherapy in Rectal Cancer: A Translational Sub-Study from the MRC CR07 Clinical Trial. *Cancers (Basel).* 2025 Sep 17;17(18):3040. doi: 10.3390/cancers17183040. PMID: 41008883; PMCID: PMC12468021.

Chen XS, Zhang L, Ajithkumar T, Butala AA, Kim MM, Mayo C, Rosen BS, Shen CJ, Murray L. Practice Patterns of Reirradiation for Brain and Spinal Tumors-An International Survey From the Reirradiation Collaborative Group (ReCOG). *Pract Radiat Oncol.* 2025 Apr 23:S1879-8500(25)00100-6. doi: 10.1016/j.prro.2025.04.003.

de Jong R, Roover R, Devlin L, Gani C, Mantello G, Portik D, Appelt A. ESTRO technical guideline: intensity modulated radiotherapy and image guided radiotherapy for rectal cancer. *Radiother Oncol.* 2026 Feb 7:111409. doi: 10.1016/j.radonc.2026.111409. Epub ahead of print. PMID: 41662929.



Elhaminia, Behnaz et al. Deep learning combining imaging, dose and clinical data for predicting bowel toxicity after pelvic radiotherapy. *Physics and Imaging in Radiation Oncology*, Volume 33, 100710. <https://doi.org/10.1016/j.phro.2025.100710>

Fatania, Kavi Sudhansu (2024) Investigating Treatment Response in Glioblastoma Using radiomic Evaluation (INTRIGUE). PhD thesis, University of Leeds.

Frood R, Gilbert A, Gilbert D, et al. Personalising anal cancer radiotherapy dose (PLATO): protocol for a multicentre integrated platform trial *BMJ Open* 2025;15:e109655. doi: 10.1136/bmjopen-2025-109655

G Mantello, E Galofaro, C Gani, D Portik, L Devlin, R De Roover, A Appelt & R de Jong. Setup and target volume shape variation in rectal cancer radiotherapy: A systematic review. *Phys Imaging Radiat Oncol*

Gilbert A, Adams R, Webster J, Gilbert DC, Abbott NL, Berkman L, Bottomley D, Brown SR, Casanova N, Copeland J, Falk S, Glynne-Jones R, Goh V, Hawkins MA, Khan S, Muirhead R, Rao S, Renehan AG, Richman SD, Ruddock S, Smith A, Stewart AJ, Whibley M, Wood HM, Sebag-Montefiore D, Harrison M

Hoffmann L, Linaa MB, Ehmsen ML, Jensen MF, Eckholdt S, Larsen C, Lund MD, Kaplan LP, Nielsen M, Ottosson W, Peucelle C, Saini A, Sand H, Thomsen SN, Fredslund S, Hansen TS, Horvat V, Knap MM, Land LH, Mortensen H, Persson G, Pøhl M, Schytte T, Szejniuk WM, Sundbye F, Appelt A. Development of a treatment planning protocol for the multi-centre reirradiation CURE Lung trial. *Radiother Oncol.* 2026 Jan;214:111293. doi: 10.1016/j.radonc.2025.111293. Epub 2025 Nov 19. PMID: 41271177.

Huddart R, Hafeez S, Griffin C, Choudhury A, Foroudi F, Syndikus I, Hindson B, Webster A, McNair H, Birtle A, Varughese M, Henry A, McLaren DB, Parikh O, Nikapota A, Tang C, Patel E, Miles E, Warren-Oseni K, Kron T, Hill C, Philipps L, Vassallo-Bonner C, Cheung KC, Gribble H, Lewis R, Hall E. 2025. Dose-escalated Adaptive Radiotherapy for Bladder Cancer: Results of the Phase 2 RAIDER Randomised Controlled Trial. *European Urology.* 60-70 87.1

Iyizoba-Ebozue Z, Prestwich R, Luijendijk M, Nicklin E, Umemneku-Chikere C, Currie S, Price J, Brown SR, Hall E, Lilley J, Lowe M, Tyyger M, Thomson DJ, Slevin F, Murray L, Boele F. Neurocognitive concerns and neurocognitive impairment in long-term survivors of oropharyngeal cancer post (chemo)radiotherapy. *J Cancer Surviv.* 2025 Aug 2. doi: 10.1007/s11764-025-01872-8. Epub ahead of print. PMID: 40750722.

Iyizoba-Ebozue, Zsuzsanna, Prestwich, Robin, O'Reilly, Karen, Murray, Louise, Boele, Florian, "It's Just Being Honest, Isn't It?" The Communication Gap on Cancer-Related Fatigue in Oropharyngeal Cancer Survivors: A Qualitative Study, *European Journal of Cancer Care*, 2025, 3052808, 10 pages, 2025. <https://doi.org/10.1155/ecc/3052808>

Jim Zhong, Finbar Slevin, Sarah Brown, Ann M. Henry. Challenges and Solutions in Conducting Randomized Controlled Trials Evaluating Prostate SBRT: Lessons Learned From



the RO-PIP Trial. *International Journal of Radiation Oncology\*Biography\*Physics*. Volume 125, Issue 1, 1st May 2026, Pages 188-192, ISSN 0360-3016, <https://doi.org/10.1016/j.ijrobp.2025.11.033>

Jim Zhong, Finbar Slevin, Sarah Brown, Maria Serra, Peter Bownes, Christopher Thompson, Rachel Reed, Kimberley Reeves, Michael Dubec, Cynthia Eccles, Robert Chuter, Yat Man Tsang, N.Jane Taylor, Catharine M.L. West, David Buckley, Roberto Alonzi, Andrew Scarsbrook, Ananya Choudhury, Peter Hoskin, Ann M. Henry, Reirradiation Options for Previously Irradiated Prostate cancer (RO-PIP): Is it feasible to randomize between treatment with stereotactic body radiotherapy (SBRT) versus high dose rate brachytherapy (HDR BT)? RO-PIP, *Clinical Oncology*, 19 February 2026, 104085, ISSN 0936-6555, <https://doi.org/10.1016/j.clon.2026.10408>

Kaplan LP, Tobin RJ, Appelt A, Vasquez Osorio E, Wahlstedt I, Christiansen RL, Nielsen MS, Rechner LA, Thomsen SN, Lund MD, Jensen K, Kronborg C, Hoffmann L. Clinical workflow for reirradiation: national consensus recommendations on imaging, treatment planning, dose accumulation, and treatment delivery. *Acta Oncol*. 2025 Jul 24;64:946-956. doi: 10.2340/1651-226X.2025.43567. PMID: 40704773; PMCID: PMC12305692.

Kelly C Paradis, Ane L Appelt, Soren M Bentzen, Nick Chng, Elizabeth L Covington, Laura A Dawson, Dorota Gabryś, Dwight E Heron, Lone Hoffmann, Andrew Jackson, Lawrence B Marks, Charles Mayo, Kilian E Salerno, Charles B Simone, Ying Xiao, Ellen Yorke, Philip Poortmans, Jeffrey C Buchsbaum, Reirradiation Collaborative Group (ReCOG) consensus on standards for dose evaluation and reporting in patients with multiple courses of radiation therapy: an AAPM/ACRO/ASTRO/CARO/COMP/CADRA/CPQR/ESTRO/NRG-endorsed consensus statement, *The Lancet Oncology*, Volume 27, Issue 2, 2026, Pages e101-e110, ISSN 1470-2045, [https://doi.org/10.1016/S1470-2045\(25\)00562-5](https://doi.org/10.1016/S1470-2045(25)00562-5). (<https://www.sciencedirect.com/science/article/pii/S1470204525005625>)

Luo T, Yan M, Zhou M, Dekker A, Appelt AL, Ji Y, Zhu J, de Ruyscher D, Wee L, Zhao L, Zhang Z. Improved prognostication of overall survival after radiotherapy in lung cancer patients by an interpretable machine learning model integrating lung and tumor radiomics and clinical parameters. *Radiol Med*. 2025 Jan;130(1):96-109. doi: 10.1007/s11547-024-01919-3. Epub 2024 Nov 14. PMID: 39542968.

Majorova D, Samuel R, Muirhead R, Hasson A, MacLean DJ, Ismail F, Cheadle EJ, Jacobs C, Halliday D, Saunders M, Nicholson BD, O'Neill E, Sebag-Montefiore D, Samson A, Olcina MM. Systemic complement protein levels as biomarkers of chemoradiotherapy response in anal squamous cell carcinoma. *Radiother Oncol*. 2026 Jan;214:111324. doi: 10.1016/j.radonc.2025.111324. Epub 2025 Dec 7. PMID: 41365374.

Marks LB, Andratschke N, Yom SS, Paradis KC, Mayo CS, Yorke ED, Jackson A, Bentzen SM, Appelt AL, Vasquez Osorio E, Dawson LA. Addressing Clinical Challenges of Reirradiation: A Continuum of Evolving Options. *Int J Radiat Oncol Biol Phys*. 2025 Nov 1;123(3):617-622. doi: 10.1016/j.ijrobp.2025.04.029. Epub 2025 Jul 23. PMID: 40704954.



Mason JD, Naidu K, Tiernan J, West NP, Cunningham C; Association of Coloproctology of Great Britain & Ireland. Reconsidering the 1 mm rule: Contextualising R1 margin status in rectal cancer. *Colorectal Dis.* 2026 Mar;28(3):e70414. doi: 10.1111/codi.70414. PMID: 41741387.

Matrosic CK, Andrzejewski P, Bergman A, Chng N, Naqa IE, Freislederer P, Hoffmann L, Hope A, Jacqmin D, Kelly C, Kuo L, Lin H, Mayo C, Murrell DH, Ödén J, Svensson S, Thompson S, Osorio EV, West N, Wicha R, Yorke E, Appelt AL, Paradis KC. Software Support Tools for Reirradiation: A Report From Reirradiation Collaborative Group (ReCOG) 2024. *Int J Radiat Oncol Biol Phys.* 2025 May 1;122(1):181-185. doi: 10.1016/j.ijrobp.2024.12.023. PMID: 40240108.

Reardon MD, Bibby BAS, Thiruthaneeswaran N, Pereira RR, Mistry H, More E, Tsang Y, Vickers AJ, Reeves KJ, Henry A, Denley H, Wylie J, Spratt DE, Hakansson A, Ryu M, Smith TAD, Hoskin PJ, Bristow R, Choudhury A, West CML. 2025. Hypoxia-Associated Gene Signatures Are Not Prognostic in High-Risk Localized Prostate Cancers Undergoing Androgen Deprivation Therapy With Radiation Therapy. *International Journal of Radiation Oncology\*Biological\*Physics.* 752-760 121.3

Russell E, O'Hara C, Andersson S, et al. An automated assessment pipeline to identify prostate treatments that need adaptive radiotherapy. *Journal of Radiotherapy in Practice.* 2024;23:e29. doi:10.1017/S146039692400027X

Samuel R, Knight SR, Adams R, Das P, Dorth J, Finch D, Guren MG, Hawkins MA, Moug S, Rajdev L, Sebag-Montefiore D, Renehan AG, Fish R; plus the CORMAC-2 collaborators.

Samuel, R.J. et al. Biological features of squamous cell carcinoma of the anus—a deep dive review. *ESMO Gastrointestinal Oncology*, 100157, ISSN 2949-8198, <https://doi.org/10.1016/j.esmogo.2025.100157>.

Sand H, Arp D, Jensen MF, Knap MM, Larsen C, Lund MD, Nielsen M, Ottosson W, Appelt A, Hoffmann L. Standardising image registration and dose mapping for thoracic reirradiation: A national multi-centre benchmarking study. *Phys Imaging Radiat Oncol.* 2026 Jan 29;37:100913. doi: 10.1016/j.phro.2026.100913. PMID: 41675034; PMCID: PMC12886061.

Sand H, Edmund J, Appelt A, Wohlfahrt P, Taasti VT, Poulsen LØ, Søndergaard J, Nielsen MS. Combined single- and dual-energy CT workflow for dose calculation in radiotherapy. *Acta Oncol.* 2025 Aug 18;64:1079-1086. doi: 10.2340/1651-226X.2025.43827. PMID: 40823803; PMCID: PMC12371750.

Schoenpflug LA, Chatzipli A, Sirinukunwattana K, Richman S, Blake A, Robineau J, Mertz KD, Verrill C, Leedham SJ, Hardy C, Whalley C, Redmond K, Dunne P, Walker S, Beggs AD, McDermott U, Murray GI, Samuel LM, Seymour M, Tomlinson I, Quirke P; S:CORT consortium; Rittscher J, Maughan T, Domingo E, Koelzer VH. Tumour purity assessment with deep learning in colorectal cancer and impact on molecular analysis. *J Pathol.* 2025 Feb;265(2):184-197. doi: 10.1002/path.6376. Epub 2024 Dec 22. PMID: 39710952; PMCID: PMC11717495.



Sekhar H, Kochhar R, Carrington B, Kaye T, Tolan D, Malcomson L, Saunders MP, Sperrin M, Sebag-Montefiore D, van Herk M, Renehan AG. Pre-treatment magnetic resonance imaging in anal cancer: large-scale evaluation of mrT, mrN and novel staging parameters. *Br J Cancer*. 2024 Oct;131(7):1137-1146. doi: 10.1038/s41416-024-02759-8. Epub 2024 Aug 21

Slevin F, Alexander S, Brown SR, Carter M, Choudhury A, Clipson A, Din O, Dive C, Gilbert A, Girvan S, Hingorani M, Jain S, Khoo V, Lilley J, Murray LJ, Naismith O, Noutch S, Oliveira P, Pagett CJH, Smith A, Talbot J, Webster J, Henry AM. 2024. Pelvis Or Involved Node Treatment: Eradicating Recurrence in Prostate Cancer (POINTER-PC) – study protocol paper for a phase III multicentre, open-label randomised controlled trial. *BMJ Open*. 14.12

Slevin F, Brown SR, Ost P, Henry AM. 2025. The POINTER-PC study-determining optimal radiotherapy for pelvic nodal recurrence in prostate cancer. *Clinical Oncology*. 103912-103912

Slevin F, Hudson EM, Boele FW, Powell JR, Noutch S, Borland M, Brown S, Bruce A, Bulbeck H, Burnet NG, Chang YC, Colaco R, Currie S, Egleston D, Fersht N, Klein M, Lilley J, Lowe M, Miles E, Murray RD, O'Hara DJ, Norris M, Parbutt C, Smith A, Smith C, Whitfield GA, Short S, Murray L. APPROACH: Analysis of Proton versus Photon Radiotherapy in Oligodendroglioma and Assessment of Cognitive Health - study protocol paper for a phase III multicentre, open-label randomised controlled trial. *BMJ Open*. 2025 Feb 26;15(2):e097810. doi: 10.1136/bmjopen-2024-097810. PMID: 40010843; PMCID: PMC11865786.

Slevin F, Hudson EM, Hockaday A, Kendall J, Noutch S, Oughton JB, Smith A, Webster JC, Sebag-Montefiore D, Brown SR. Radiating Excellence: A Decade of Pioneering Radiotherapy Trials and Collaborative Leadership at Leeds Cancer Research UK Clinical Trials Unit. *Clin Oncol (R Coll Radiol)*. 2025 Nov;47:103937. doi: 10.1016/j.clon.2025.103937. Epub 2025 Sep 10. PMID: 41033236.

Slevin F, Nix M, O'Hara C, Entwisle J, Lilley J, Thompson C, Tyyger M, Appelt AL, Murray LJ. Response to 'Dose Accumulation for Pelvic Stereotactic Ablative Radiotherapy Reirradiation. In Regard to Slevin et al.'. *Clin Oncol (R Coll Radiol)*. 2025 Jul 3;45:103901. doi: 10.1016/j.clon.2025.103901.

Slevin F, O'Hara C, Entwisle J, Lilley J, Nix M, Thompson C, Tyyger M, Appelt AL, Murray LJ. Dose Accumulation for Pelvic Stereotactic Ablative Radiotherapy Reirradiation. *Clin Oncol (R Coll Radiol)*. 2025 Jul;43:103861. doi: 10.1016/j.clon.2025.103861. Epub 2025 May 9. PMID: 40435870

Theophanous S, Lønne PI, Choudhury A, Berbee M, Deijen CL, Dekker A, Field M, Gambacorta MA, Gilbert A, Guren MG, Jadon R, Kochhar R, Martin D, Mohamed AA, Muirhead R, Parés O, Raszewski L, Roy R, Scarsbrook A, Sebag-Montefiore D, Spezi E, Vassiliou V, Malinen E, Wee L, Appelt A, atomCAT Consortium. An international multi-centre study to develop and validate federated learning-based prognostic models for anal cancer. *Nature Comms* 14 March 2026 <https://doi.org/10.1038/s41467-026-70297-3>



Thiong'o CM, Davey A, Appelt A, Day M, Dupuis P, Monti S, Perez-Alija J, Skopidou T, Svensson S, Vasquez Osorio E. Dose Mapping Using Image Registration for Reirradiation: A Systematic Review. *Int J Radiat Oncol Biol Phys*. 2025 Oct 11:S0360-3016(25)06326-6. doi: 10.1016/j.ijrobp.2025.09.053. Epub ahead of print. PMID: 41083027.

Thiong'o CM, van Herk M, Banfill K, Chan C, Harris C, Lowe M, Marchant T, Mohamed I, Motamedi-Ghahfarokhi G, Thomson D, Appelt A, Osorio EV. Individualised dose mapping uncertainty estimation in the reirradiation setting. *Phys Imaging Radiat Oncol*. 2025 Dec 2;36:100881. doi: 10.1016/j.phro.2025.100881. PMID: 41451147; PMCID: PMC12732311.

Tyyger M, Iyizoba-Ebozue Z, Nicklin E, Boele F, Lilley J, Murray L, Osorio EV. Associations between patient-reported neurocognition, mood, and fatigue and radiation dose in oropharyngeal cancer survivors. *Radiother Oncol*. 2026 Jan;214:111309. doi: 10.1016/j.radonc.2025.111309. Epub 2025 Nov 26. PMID: 41314395.

Ward JC, Morgan M, Wood J, Woolley C, de Menezes AAN, Finch A, Sherwood K, Huang Q, Henry CS, Fernández-Tajes J, Soriano I, Thorn S, Legge I, McCullagh J, Kerr D, Kerr R, Hejmadi RK, Arends MJ; S:CORT Consortium; Domingo E, Maughan T, Bardella C, Tomlinson I. Analysis of IDH1 and IDH2 mutations as causes of the hypermethylator phenotype in colorectal cancer. *J Pathol*. 2025 Sep;267(1):40-55. doi: 10.1002/path.6446. Epub 2025 Jun 22. PMID: 40545636; PMCID: PMC12337813.

Westwood, A.C., Wilson, B.I., Laye, J. et al. Deep-learning enabled combined measurement of tumour cell density and tumour infiltrating lymphocyte density as a prognostic biomarker in colorectal cancer. *BJC Rep* 3, 12 (2025). <https://doi.org/10.1038/s44276-025-00123-8>

Willmann J, Balermipas P, Rimner A, Appelt AL, Vasquez Osorio EM, Rønde HS, Day M, Embring A, Gabryś D, Guren MG, Hoskin P, Massacesi M, Mayo C, Murray L, Nieder C, Guckenberger M, Andratschke N. Ongoing prospective studies on reirradiation: A systematic review of a clinical trials database. *Radiother Oncol*. 2025 Jan;202:110624. doi: 10.1016/j.radonc.2024.110624. Epub 2024 Nov 10. PMID: 39532233.

Zenk, M., Baid, U., Pati, S. et al. Towards fair decentralized benchmarking of healthcare AI algorithms with the Federated Tumor Segmentation (FeTS) challenge. *Nat Commun* 16, 6274 (2025). <https://doi.org/10.1038/s41467-025-60466-1>

Zhang, Y., Brand, D., Shen, Z., Simard, M., Hindocha, S., Chohan, O., Lopes, A., Begum, R., West, N., Appelt, A., Gilbert, A., Miles, E., Maughan, T., Sebag-Montefiore, D., Hawkins, M.A., Fekete, C.C., Predicting acute diarrhoea in rectal cancer chemoradiotherapy: Secondary analysis of the phase III ARISTOTLE trial, *Radiotherapy and Oncology* (2025), doi:<https://doi.org/10.1016/j.radonc.2025.111032>

Zhong J, Davey A, Frood R, McWilliam A, Shortall J, Reardon M, Reaves K, Swinton M, Hulson O, West C, Buckley D, Brown S, Choudhury A, Hoskin P, Henry A, Scarsbrook A. 2025. Combining MRI radiomics, hypoxia gene signature score and clinical variables for prediction



of biochemical recurrence-free survival after radiotherapy in prostate cancer. *La radiologia medica*

Zhuoyan Shen, Douglas Brand, Mikaël Simard, Adam P. Levine, Sumeet Hindocha, Talisa Mistry, Dahmane Oukrif, Andre Lopes, Rubina Begum, Nicholas P. West, Ying Zhang, Gary Royle, Tim S. Maughan, David Sebag-Montefiore, Maria A. Hawkins, Charles-Antoine Collins-Fekete. AI-powered immune profiling from histopathology slides for chemo-radiotherapy outcome prediction in rectal cancer: a study using clinical trial and real-world cohorts. *eBioMedicine*, 17 November 2025, 105993. ISSN 2352-3964.  
<https://doi.org/10.1016/j.ebiom.2025.105993>.