Tom Kelsey

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Education & Qualifications

○ 2000 – PhD in Computer Science, University of St Andrews
○ 1995 – MSc in Numerical Analysis & Programming, University of Dundee
○ 1994 – BSc in Mathematics, Heriot Watt University

Appointments

○ **School of Computer Science, University of St Andrews**
  - August 2019 – Present   Professor of Health Data Science
  - August 2017 – July 2019   Reader in Health Data Science
  - August 2013 – July 2017   Senior Lecturer
  - September 2010 – July 2013   Lecturer
  - September 2003 – August 2010   Senior Research Fellow
  - November 1999 – August 2003   Research Fellow

Scholarly Activities

REF 2027

I am returned by both the School of Medicine and the School of Computer Science at the University of St Andrews.

Currently proposed as research outputs for Medicine:

1. Spatio-temporal remodelling of the composition and architecture of the human ovarian cortical extracellular matrix during in vitro culture; March 2023 **Human Reproduction**; DOI:10.1093/humrep/dead008
2. A predictive model of the effect of therapeutic radiation on the human ovary; Nov 2022 **PLoS ONE** ; DOI:0.1371/journal.pone.0277052
3. Survival after breast cancer in women with a subsequent live birth: influence of age at diagnosis and interval to subsequent pregnancy; June 2022; **European Journal of Cancer**; DOI:10.1016/j.ejca.2022.06.048
4. Diagnostic and predictive accuracy of anti-mullerian hormone for ovarian function after chemotherapy in premenopausal women with early breast cancer; Jan 2022; **Breast Cancer Research and Treatment**; DOI:10.1007/s10549-021-06508-w
5. Performance of plasma kisspeptin as a biomarker for miscarriage improves with gestational age during the first trimester; May 2021; **Fertility and Sterility**; DOI:10.1016/j.fertnstert.2021.04.031
6. Changes in circulating kisspeptin levels during each trimester in women with antenatal complications; August 2021; **Journal of Clinical Endocrinology and Metabolism**; DOI:10.1210/clinem/dgab617
7. Family size and fertile lifespan in female cancer survivors: a population based analysis; Dec 2021; **Fertility and Sterility**; DOI:10.1016/j.fertnstert.2021.11.011

Currently proposed as research outputs for Computer Science:

1. Cross-user inter-domain and intra-domain adaptation in human activity recognition using wireless signals; M Hassan, T W Kelsey, F Rahman; **PLoS ONE** 19(4): , doi:10.1371/journal.pone.0298888
2. Large language models in ORL – Danger or opportunity? C R Buhr, H Smith, T Huppertz, K Bahr-Hamm, C Matthias, C Cuny, J P Snijders, B Erst, A Blaikie, T W Kelsey, S Kuhn, J Eckrich;

Laryngo-Rhino-Otologie, doi:10.1055/s-0044-1784577

3. ChatGPT vs. Consultants: A Pilot Study on Answering Otorhinolaryngology Case-Based Questions; C R Buhr, H Smith, T Huppertz, K Bahr-Hamm, C Matthias, A Blaikie, T W Kelsey, S Kuhn, J Eckrich **JMIR Medical Education** 9:, doi:10.2196/49183

REF 2021

Research outputs, together with number of citations (Google Scholar – accessed 29th December 2023) or views since publication:

1. The impact of cancer on subsequent chance of pregnancy: a population-based analysis; Jul 2018; **Human Reproduction** 33(7); **236citations**
2. Fertility preservation for girls and young women with cancer: Population-based validation of criteria for ovarian tissue cryopreservation; Sep 2014; **The Lancet Oncology** 15(10); **268 citations**
3. Follicle Size on Day of Trigger Most Likely to Yield a Mature Oocyte; **Frontiers in Endocrinology** 9(193). With over **1,300,000 views**, this article is the most viewed of 13,362 Frontiers in Endocrinology articles
4. A validated age-related normative model for male total testosterone shows increasing variance but no decline after age 40 years; Oct 2014; **PLoS One** 9 e109346; **183 citations**
5. Cancer treatment and gonadal function: experimental and established strategies for fertility preservation in children and young adults; Jul 2015; **The Lancet Diabetes & Endocrinology** 3(7); **341 citations**

REF 2014 & RAE 2007

Research outputs, together with number of citations (Google Scholar – accessed 29th December 2023) since publication:

1. Human ovarian reserve from conception to the menopause; 2010; PLoS One. 5, e8772; **940 citations**
2. A validated model of serum anti-Müllerian hormone from conception to menopause; 2011; PLoS One. 6, e22024; **596 citations**
3. Which follicles make the most anti-Müllerian hormone in humans?: Evidence for an abrupt decline in AMH production at the time of follicle selection; 2013; Molecular Human Rep. 19(8); **432 citations**
4. Can Anti-Müllerian hormone predict the diagnosis of polycystic ovary syndrome?: A systematic review and meta-analysis of extracted data; 2013; J Clinical Endocrinology & Metabolism 98(8); **378 citations**
5. Tractable symmetry breaking using restricted search trees; 2004; Proceedings of the 16th European Conference on Artificial Intelligence; **97 citations**
6. The radiosensitivity of the human oocyte; 2003; Human Reproduction 18(1); **837 citations**
7. Predicting age of ovarian failure after radiation to a field that includes the ovaries; 2005; International Journal of Radiation Oncology Biology Physics. 62(3); **784 citations**
8. Ovarian reserve and reproductive age may be determined from measurement of ovarian volume by transvaginal sonography; 2004; Human Reproduction 19(7); **215 citations**

Awards

1. Reproductive function in teenage and young adult cancer patients in the UK. MRC MR/W019140/1 PI: R Anderson – **£3,880,000** 1/12/2021
2. Detecting high-risk smokers in Primary Care Electronic Health Records: An automatic classification, data extraction and predictive modelling approach, The Melville Trust, **£120,000** 1/08/2019 – 31/07/2021
3. Reproductive function in young adult cancer patients in the UK, TYA CSG of the National Cancer Research Institute, **£150,000** 1/08/2019 – 28/02/23
4. SERUMS Project. EU Horizon2020 project 826278 (St Andrews Component of €4.5m award). PI: K Hammond – **£800,000** 1/011/18 – 30/10/23
5. UK Institute for Health & Bioinformatics Research (St Andrews component of £37m award). PI: F Sullivan – MRC: **£450,000** 1/04/18 – 30/06/23
6. Development and feasibility of a communication training package for therapeutic radiographers to manage emotional talk with breast cancer patients in treatment. PI: G Humphris – Breast Cancer Now:

£88,168 1/02/18 – 31/01/20

7. A Constraint Modelling Pipeline: A Constraint Modelling Pipeline. PI: I Miguel – EPSRC: **£886,923** 1/04/17 – 30/09/20

8. Pilot of the Mini-AFTERc intervention to manage fear of cancer recurrence. PI: G Humphris – CSO: **£249,495** 1/01/18 – 31/08/21

9. A Constraint Solver Synthesiser: A Constraint Solver Synthesiser. PI: I Miguel – EPSRC: **£929,076** 1/10/09 – 30/09/14

10. Fife Health and Social Care Partnership; MapMySmoke development; **£1,500**

11. NHS Fife R & D; Smart device applications for smoking cessation; **£20,000**

12. EPSRC Impact Acceleration Award; Medical and Healthcare mobile apps; **£16,808**

Collaborations & Contributions

- Edinburgh Fertility – I work closely with Professors Anderson, Telfer and Wallace (resp. Reproductive Endocrinology, Reproductive Physiology and Paediatric Oncology) at the University of Edinburgh. We have a long established track record of publication in high-impact journals such as The Lancet Oncology, The Lancet Diabetes & Endocrinology, the European Journal of Cancer and Human Reproduction. My contribution is
  - the careful identification, aggregation, imputation and linkage of data suitable for studies into the late effects of cancer treatments on survivors of cancer
  - the use of modern AI machine learning techniques to derive and validate predictive models related to fertility in the healthy and treated populations
  - collaboration with colleagues at ISD and NSS to perform population-based analyses that compare fertility outcomes for cancer survivors with other members of the same community
  - critical evaluation of how our models and results relate to oncofertility research disseminated by groups in other countries

- Copenhagen University Hospital – I provide non-clinical expertise to the group headed by Professor Anderson investigating cryopreservation of ovarian tissue as a fertility preservation technique for a range of conditions. We have an established track record of publication in high-impact journals such as Fertility & Sterility, Science of the Total Environment and Molecular Human Reproduction. My contribution is
  - the accurate prediction of attributes (that are unmeasurable *in vivo*) needed to quantify differences in the populations under investigation
  - the application of AI and statistical learning methods to quantify the certainty of results based on small samples

- Reproductive & Maternal Medicine, Glasgow – I work with Professor Nelson and Dr Iliodromiti at the University of Glasgow, investigating endocrine markers as diagnostic tools. We have an established track record of publication in high-impact journals such as the Journal of Clinical Endocrinology & Metabolism, Diabetologia and Molecular Human Reproduction Update. My contribution is
  - the use of hierarchical summary ROC analysis to accurately combine published diagnostic results into a single estimate
  - the careful combination of local data with summaries of published data to increase the power of investigations and provide enhanced clinical utility

- The Wolfson Fertility Centre – I am a regular visitor to the group headed by Professor Dhillo of Imperial College, London, working on individualised approaches to assisted conception, with recent publications in journals such as Clinical Endocrinology and Frontiers in Endocrinology. My contribution is
  - the adaptation of the tools and techniques I have developed for fertility after cancer to the wider problem of helping subfertile couples to have children
  - the careful combination of baseline, longitudinal and outcome IVF data from centres in London, Copenhagen and Vietnam
  - the use of modern AI knowledge discovery techniques to identify multivariate combinations of features that maximise chances of a live birth

- advanced dose-response modelling using combinations of nonlinear regression, generalized (non)linear regression, and parametric survival analysis
- The University of St Andrews – I am an active researcher within
  - the Artificial Intelligence Research Group
  - the Population and Behavioural Science Division of the School of Medicine
  - the Digital Health Science Initiative
  - the St Andrews Institute for Data-Intensive Research
  - the Health Informatics Group within the School of Computer Science

Academic Organisation

- 2010 – 2017 Programme Committee Member, AAAI Conference on Artificial Intelligence, International Joint Conference on Artificial Intelligence; Workshop on Knowledge Engineering, Discovery and Dissemination (IEEE International Conference on Bioinformatics & Biomedicine); International Conference on Artificial Intelligence and Symbolic Computation; Workshop on Combining Constraint solving with Mining and Learning.
- 2010 – 2015 St Andrews Representative, Scottish Informatics and Computer Science Alliance (SICSA), Modelling and Abstraction theme.

Peer Review Activities

- 2020 – 2023 **Research Topic Editor**; Endometrial Thickness as a Risk Factor for Pregnancy Complications; Frontiers in Endocrinology
- 2019 – 2022 **Associate Editor** for Human Reproduction Update (Impact Factor 17.179).
- 2018 – 2024 **Associate Editor** for Frontiers in Physiology (Impact Factor 5.556).
- 2018 – 2024 **Associate Editor** for Frontiers in Endocrinology (Impact Factor 6.055).
- 2018 – 2020 **Research Topic Editor**; Ovarian Ageing: Pathophysiology and Recent Development of Maintaining Ovarian Reserve; Frontiers in Endocrinology
- 2009 **Editor**: Symmetry and Search, Annals of Mathematics and Artificial Intelligence, 57(1).
- 2008 – 2024 **Research Council Reviewer**: EPSRC; BBSRC; Science Foundation Ireland; Singapore A-star Joint Council Office; NIHR AI and Racial and Ethnic Inequalities in Health and Care
- 2004 – 2022 **Reviewer**: International Journal of Radiation Oncology Biology Physics, Nature Scientific Reports, British Medical Journal, AAAI Conference on Artificial Intelligence, BMJ Open, Human Reproduction Update, Optimization Letters, Systems Biology in Reproductive Medicine; International Conference on Principles and Practice of Constraint Programming; Human Reproduction; International Conference on Artificial Intelligence and Symbolic Computation; Conference of the Association for the Advancement of Artificial Intelligence; Mathematical Medicine & Biology; International Joint Conference on Artificial Intelligence; Journal of Pediatric Endocrinology and Metabolism; The Computer Journal; European Journal of Obstetrics & Gynecology and Reproductive Biology; Conference on Automated Deduction; International Conference on Logic for Programming, Artificial Intelligence, and Reasoning; Molecular Human Reproduction; Psychoneuroendocrinology; Health Education Journal; Current Opinion in Endocrine and Metabolic Research

Engagement

Professional Bodies

- 2011 – 2024   Fellow, The Royal Society of Medicine
- 2011 – 2024   Member, The International Society for Fertility Preservation
- 2008 – 2011   Member, The Royal Society of Medicine

Steering Committees & Advisory Bodies

- 2011 – 2019   Board Member, Managed Services Network for Children and Young People with Cancer, NHS Scotland, also specialist advisor on Working Groups:

- Operational Delivery – detailed oversight of neuro-oncology, palliative care, psychosocial care, pharmacy and Multidisciplinary Team organisation
- MyStoryNow e-Passport App – pan-Scotland linkage of EHR, TRAK & scan data
- Safety checklists – pan-Scotand linkage of TRAK data to improve patient safety and resource utilisation
- Clinical Governance
- 2011 – 2014   External Assessor, eHealth Clinical Portal Benefits Realisation, NHS Scotland
- 2006 – 2011   Board Member, The Children and Teenagers Scottish Cancer Network, NHS Scotland Managed Clinical Network, also specialist advisor on Working Groups:
  - Multidisciplinary Team Communications
  - eHealth Strategy for Chemotherapy

Adjunct & Visiting Positions

- 2010 – 2024 Scientific Director, The Wallace-Kelsey Research Foundation
- 2017 – 2024 Visiting Professor, The Wolfson Fertility Centre at Hammersmith Hospital
- 2016 & 2020 Visiting Professor, Laboratory of Reproductive Biology, Copenhagen University Hospital
- 2015 – 2016 Visiting Professor, Faculty of Medicine, Imperial College, London
- 2012   Visiting Professor, Universidade de Lisboa, Portugal
- 2008 – 2010 Visiting Professor, La Universidad de la República, Montevideo, Uruguay

Smart Device Applications

In order to promote knowledge transfer of AI research results in health data science, I design, implement, validate and release apps for Apple iOS and Google Android devices.

- MyStoryNow – ePassport for survivors of childhood cancer, containing scans & treatment history. NHS Public Benefit and Privacy Panel for Health approval in March 2019; Community Health Index Advisory Group approval in Feb 2019; Android app to be released later in 2019
- ivfPredict – calculation of individualised chances of a live birth after an IVF cycle. iOS and Android app released in 2012
- MyGraine – recording and visualisation of migraine-related symptoms & events. Android release 2015
- MapMySmoke – recording and logging craving and smoking events during quit attempts. iOS and Android versions currently being validated in conjunction with NHS Fife.
- Forecast2 & Mini-AFTERc – recording and logging fears of recurrence of breast cancer. iOS and Android versions being developed for validation in conjunction with NHS Lothian & NHS Tayside.

Career Development

Specialist methodology support for fellowships

- MRC Experimental Challenges Fellowship – Ali Abbara of Imperial College London, project title "Individual Luteal-phase Support", funded Jan 2019
- Senior Clinical Fellowship from the Chief Scientist Office – Rod Mitchell of the University of Edinburgh, project title "Protect, Preserve, Restore – Fertility Preservation in Prepubertal Boys with Cancer", funded Nov 2018
- I have funded and supervised 18 paid summer internship projects, giving students experience of collective working to satisfy managers and clients, in addition to their work towards a good degree. The primary aim is providing education and training in mobile app design, development and deployment.

Invited Talks

- KEYNOTE VII: Machine learning and artificial intelligence and future perspectives for health care, International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer - ISLCCC 22, Utrecht July 2022
- 12th Advanced Paediatric Oncology Course: Integrating precision medicine into the advanced clinical care of children with cancer, APOC 12, May 2022
- A tool for comparing radiotherapy treatment plans in terms of later fertility for survivors, EUOS Conference 2021, April 2021

- Paediatric Visiting Club, North Berwick, September 2019
- 11th Advanced Paediatric Oncology Course, Edinburgh, May 2019
- Fear of reoccurrence of breast cancer smartphone apps demonstration, EPSRC Impact Festival, Glasgow, March 2019
- Computing AI and Machine Learning Live expert panel member for the launch event on the future of artificial intelligence and machine learning, London, November 2018
- EPSRC Impact Festival, Edinburgh, March 2018
- NHS Scotland MSN CYPC Mortality & Morbidity Event, November 2017
- 10th Advanced Paediatric Oncology Course, Edinburgh, May 2017
- Scottish Smoking Cessation Conference, November 2016
- Edinburgh Fertility Preservation, Edinburgh, June 2016
- Keynote invited speaker at the 4th Biennial World Congress of the International Society for Fertility Preservation held in Shanghai, PRC in November 2015
- 61st Annual Meeting of the Canadian Fertility and Andrology Society, Halifax, Nova Scotia, Canada in October 2015
- 9th Advanced Paediatric Oncology Course, Edinburgh, May 2015
- ADUP (App Data as a Utility for Public Health) Workshop, Glasgow, April 2015
- ISFP meeting on "Freezing of oocytes, embryos and ovarian tissue: focus on fertility management and fertility preservation", held in Bruxelles, Belgium in January 2015
- European Symposium On Late Complications After Childhood Cancer, September 2014
- 8th Advanced Paediatric Oncology Course, Edinburgh, May 2013
- International Symposium on Fertility preservation: from endometriosis to ovarian tissue cryopreservation, Bruxelles, September 2012
- International Conference on Mathematical Modeling in Physical Sciences, Budapest, September 2012
- Workshop on Constraint Based Methods for Bioinformatics, Budapest, September 2012
- SICSA workshop on Biology and Computation, May 2012
- 15th International Conference on the Development and Function of Reproductive Organs, Edinburgh, September 2011
- Workshop on Eulerian and Lagrangian approaches towards quantitative prediction of premature labour, normal and dysfunctional full term labour, Edinburgh, August 2011
- International Conference on Computational Science, Singapore, June 2011
- 7th Advanced Paediatric Oncology Course, Edinburgh, May 2011
- SICSA workshop on Systems Medicine, Dundee, May 2011
- Workshop on Knowledge Engineering, Discovery and Dissemination, Hong Kong, September 2011
- University of Aberystwyth, April 2010
- University of Birmingham, December 2010
- Institut Pasteur - Montevideo, February 2010
- International Society for Computational Bioloby, Latin America meeting- Montevideo March 2010
- SBF/SBMN meeting on biological research image processing and visualisation in the context of modeling, Edinburgh, March 2009
- 36th Jornadas Agentinas de Informatica, Mar del Plata, Argentina, February 2008
- 11th International Conference on Principles and Practice of Constraint Programming, Sitges, Oct 2005
- 7th International Conference on Artificial Intelligence and Symbolic Computation, Linz, Sept 2004

Teaching

I am the Director of Digital Studies at the School of Computer Science. I designed, co-produced and am Programme Director for the Online PGT Programme in Data Science. Learning is self-paced and adaptive, based on materials and contact delivered entirely online. The programme attracted 90 students

in the 12 months since inception in September 2023. This role involves the induction and advising of students onto the Data Science programme, monitoring and revising self-led study plans, co-ordination of synchronous teaching activity, organisation of formal module boards, and day-to-day operation with colleagues from the School, Registry, CEED, IT Services and DEIS support staff to deliver the programme at the standards expected for postgraduate study at the University of St Andrews. Further responsibility has involved co-operation with colleagues in Art History, Modern Languages, Statistics, Geography & Sustainable Development and the Business School in the design and creation of their programmes, and the careful incorporation of my module content into their programmes.

Upskill

- The University of St Andrews offers courses to upskill both both individuals and businesses. I have designed and delivered the Knowledge Discovery and Datamining module in 2021 and 2022.
- The University of St Andrews designs tailor-made courses to meet the specific requirements of other educational institutions and organisations. I have designed and delivered modules in Machine Learning for Financial Prediction and Natural Language Processing for Credit Risk Analysis in June 2021

Undergraduate & PGT

- 2022 – 2024 Programme Director, Online postgraduate courses in Data Science
- 2019 – 2020 Programme Co-director, MSc in Digital Health
- 2017 – 2018 Honours and MSci Coordinator, School of Computer Science
- 2015 – 2018 Programme Director, MSc in Data Intensive Analysis
- 2012 – 2017 Projects Coordinator, School of Computer Science
- 2012 – 2024 Module Developer, ID5059 Datamining & Knowledge Discovery
- 2018 Module Developer, CS5002 Programming Principles and Practice
- 2010 – 2024 design and delivery of modules
  - Pre-honours: CS1005, CS1006, CS2001, CS2002, CS2003, CS2101
  - Honours: CS3302, CS3052, CS3302, CS4303, CS4052
  - MSc: CS5010, IS5101, CS5002, IS5102, ID5059, CS5040
- 2010 – 2024 supervision of 137 single-student projects at CS4000, CS5000, IS5000 and GD5000 levels

Postgraduate Research Supervision

- 5 current PhD students under supervision at St Andrews
- 12 PhD students previously supervised at St Andrews
- Co-supervision of a PhD with the Universitat Polytécnica de Valéncia, Spain

Postgraduate Examination

- 2012 External Examiner, University of Dundee, Computer Science, PhD
- 2011 – 2024 Internal Examiner, University of St Andrews, Computer Science, PhD
- 2011 – 2024 Exam convener, University of St Andrews, Computer Science, PhD
- 2008 External Examiner, Queen Mary University of London, Computer Science, MPhil

Publications

Two manuscripts currently in press:

- Thasing sleep physicians: ChatGPT-4o on the interpretation of polysomnographic results; C R Buhr, H Smith, T Huppertz, K Bahr-Hamm, C Matthias, C Cuny, J P Snijders, B Erst, A Blaikie, T W Kelsey, S Kuhn, J Eckrich; European Archives of Oto-Rhino-Laryngology
- Machine learning to predict interim response in paediatric classical Hodgkin lymphoma using affordable blood tests; J A Geel, A Hramyka, A Van Zyl, J Du Plessis, M G Hendricks, Y Goga, A Carr, B Neethling, T W Kelsey, F Omar , R Mathew, L Louw, T Naidoo , T V Z Ngcana, T M Schickerling, V Netshituni, E Madzhia, L Du Plessis, D E Ballot, M L Metzger; JCO Global Oncology

131 peer-reviewed publications – 19 as first author; 46 as second author; 19 as last author.

h-index: 43 ● i10-index: 104 ● Citations in 2024 to date: 760 ● Total citations: 10,834

Published peer-reviewed research outputs:

William Hamish B Wallace and Tom W Kelsey. Primary ovarian insufficiency prediction in adult survivors of childhood cancer: model concerns. *Lancet Oncol.*, 25(2):e57, February 2024.

Muhammad Hassan, Tom Kelsey, and Fahrurrozi Rahman. Adversarial AI applied to cross-user inter-domain and intra-domain adaptation in human activity recognition using wireless signals. *PLOS ONE*, 19(4): 1–21, 04 2024. doi: 10.1371/journal.pone.0298888. URL https://doi.org/10.1371/journal.pone.0298888.

Simon Hanassab, Ali Abbara, Arthur C Yeung, Margaritis Voliotis, Krasimira Tsaneva-Atanasova, Tom W Kelsey, Geoffrey H Trew, Scott M Nelson, Thomas Heinis, and Waljit S Dhillo. The prospect of artificial intelligence to personalize assisted reproductive technology. *NPJ Digit. Med.*, 7(1):55, March 2024a.

Sinan Khadhouri, Artsiom Hramyka, Kevin Gallagher, Alexander Light, Simona Ippoliti, Marie Edison, Cameron Alexander, Meghana Kulkarni, Eleanor Zimmermann, Arjun Nathan, Luca Orecchia, Ravi Banthia, Pietro Piazza, David Mak, Nikolaos Pyrgidis, Prabhat Narayan, Pablo Abad Lopez, Faisal Nawaz, Trung-Thanh Tran, Francesco Claps, Donnacha Hogan, Juan Gomez Rivas, Santiago Alonso, Ijeoma Chibuzo, Beatriz Gutierrez Hidalgo, Jessica Whitburn, Jeremy Teoh, Gautier Marcq, Alexandra Szostek, Jasper Bondad, Petros Sountoulides, Tom Kelsey, Veeru Kasivisvanathan, and IDENTIFY Study Group. Machine learning and external validation of the IDENTIFY risk calculator for patients with haematuria referred to secondary care for suspected urinary tract cancer. *Eur. Urol. Focus*, June 2024.

W H Wallace, T W Kelsey, D Morrison, and R A Anderson. Live birth and maternity outcome in childhood and adolescent cancer survivors under 18 years at diagnosis: a 40-year population-based cohort study. *Br. J. Cancer*, September 2024.

Calum McHale, Susanne Cruickshank, Tamara Brown, Claire Torrens, Jo Armes, Deborah Fenlon, Elspeth Banks, Tom Kelsey, and Gerald Humphris. Mini-AFTERc: a controlled pilot trial of a nurse-led psychological intervention for fear of breast cancer recurrence. *Pilot Feasibility Stud.*, 10(1):3, January 2024.

J. Geel, A. van Zyl, J. D. Plessis, M. Hendricks, Y. Goga, A. Carr, B. Neethling, A. Hramyka, F. Omar, R. Mathew, L. Louw, T. Naidoo, T. Ngcana, T. Schickerling, V. Netshituni, E. Madzhia, L. du Plessis, T. Kelsey, D. E. Ballot, and M. L. Metzger. Improved survival of children and adolescents with classical Hodgkin lymphoma treated on a harmonised protocol in South Africa. *Pediatr Blood Cancer*, 71(1): e30712, Jan 2024.

Christoph Raphael Buhr, Harry Smith, Tilman Huppertz, Katharina Bahr-Hamm, Christoph Matthias, Clemens Cuny, Jan Phillipp Snijders, Benjamin Ernst, Andrew Blaikie, Tom Kelsey, et al. Large language models in orl–danger or opportunity? *Laryngo-Rhino-Otologie*, 103(S 02), 2024.

S Hanassab, S M Nelson, A Akbarov, A C Yeung, A Hramyka, T Alhamwi, R Salim, A N Comninos, G H Trew, T W Kelsey, et al. Explainable artificial intelligence (xai) to determine the follicle sizes on trigger day that maximize mature oocyte yield. *Human Reproduction*, 39(Supplement_1):deae108–258, 2024b.

A Hramyka, T Kelsey, S Hanassab, S Nelson, A Yeung, R Salim, A Comninos, K Tsaneva-Atanasova, M Voliotis, G Trew, et al. Modelling individual follicle growth rates during ovarian stimulation in

medically assisted reproduction cycles to enable prediction of final follicle profiles. *Human Reproduction*, 39(Supplement_1):deae108–1030, 2024.

Simon Hanassab, Ali Abbara, Tom W. Kelsey, Arthur CY. Yeung, Artsiom Hramyka, Toulin Alhamwi, Rehan Salim, Alexander N. Comninos, Geoffrey H. Trew, Scott M. Nelson, Thomas Heinis, and Waljit S. Dhillo. Optimizing oocyte yield: unveiling the ideal follicle sizes on the day of trigger using interpretable machine learning. *Fertility and Sterility*, 120(4, Supplement):e34–e35, 2023a. ISSN 0015-0282. doi: https://doi.org/10.1016/j.fertnstert.2023.08.132. URL https://www.sciencedirect.com/science/article/pii/S0015028223008932. 79th Scientific Congress of the American Society for Reproductive Medicine.

T W Kelsey et al. J A Geel, A Hramyka. A national harmonised protocol for classical hodgkin lymphoma results in improved survival rates of children and adolescents in south africa. In *International Society of Pediatric Oncology: SIOP 23*, 2023a.

T W Kelsey et al. J A Geel, A Hramyka. Interim analysis: Changes in erythrocyte sedimentation rate, albumin and lactate dehydrogenase to predict pet response in hodgkin lymphoma. In *International Society of Pediatric Oncology: SIOP 23*, 2023b.

D Gook, M Assis, J Lin, K Stern, T Kelsey, R Anderson, and Y Jayasinghe. Biovular follicles are commonly found in prepubertal but not adult ovaries. *Human Reproduction*, 38:dead093.767, 06 2023. ISSN 0268-1161. doi: 10.1093/humrep/dead093.767. URL https://doi.org/10.1093/humrep/dead093.767.

S Hanassab, A Abbara, T Alhamwi, A Comninos, R Salim, G Trew, S Nelson, T Kelsey, T Heinis, and W Dhillo. Using machine learning to determine follicle sizes on the day of trigger most likely to yield oocytes. *Human Reproduction*, 38:dead093.952, 06 2023b. ISSN 0268-1161. doi: 10.1093/humrep/dead093.952. URL https://doi.org/10.1093/humrep/dead093.952.

H Fatemi, T W Kelsey, and B Lawrenz. Ovarian ageing: Pathophysiology and recent development of maintaining ovarian reserve. *Frontiers in Endocrinology*, 15, 2023.

C. R. Buhr, H. Smith, T. Huppertz, K. Bahr-Hamm, C. Matthias, A. Blaikie, T. Kelsey, S. Kuhn, and J. Eckrich. ChatGPT Versus Consultants: Blinded Evaluation on Answering Otorhinolaryngology Case-Based Questions. *JMIR Med Educ*, 9:e49183, Dec 2023.

T. Kelsey. Models and Biomarkers for Ovarian Ageing. *Subcell Biochem*, 103:185–199, 2023.

K. Duffin, R. Howie, T. W. Kelsey, H. B. Wallace, and R. A. Anderson. Long-term follow-up to assess criteria for ovarian tissue cryopreservation for fertility preservation in young women and girls with cancer. *Hum Reprod*, 38(6):1076–1085, Jun 2023.

J. Grosbois, E. C. Bailie, T. W. Kelsey, R. A. Anderson, and E. E. Telfer. Spatio-temporal remodelling of the composition and architecture of the human ovarian cortical extracellular matrix during in vitro culture. *Hum Reprod*, Jan 2023.

T Alhamwi, A Abbara, S Hanassab, A Comninos, T W Kelsey, R Salim, T Heinis, and W Dhillo. Follicle Sizes That are Most Likely to Yield Oocytes During In Vitro Fertilisation (IVF) Treatment. *Endocrine Abstracts*, 86(P275), 2022. doi: 0.1530/endoabs.86.P275. URL https://www.endocrine-abstracts.org/ea/0086/ea0086p275.

R Anderson, M Lambertini, P Hall, H Wallace, D Morrison, and T Kelsey. Age at diagnosis, previous pregnancy and interval to pregnancy influence survival after breast cancer in women with a subsequent live birth. *Human Reproduction*, 37(Supplement1), 06 2022a. ISSN 0268-1161. doi: 10.1093/humrep/deac105.110. URL https://doi.org/10.1093/humrep/deac105.110.

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