

Welcome to the second CRI newsletter for 2023

Our quarterly newsletters highlight the many cancer-related research activities in the Faculty of Health Sciences. Previous editions of the newsletter are published on the [CRI website](#).

Recent events

The SAMRC/UCT Gynaecological Cancer Research Centre celebrated **World Ovarian Cancer Awareness Day** on 11<sup>th</sup> May, by hosting a hybrid research day at the Neuroscience Auditorium, Groote Schuur Hospital (GSH). Presentations from well-known experts in their field included **Prof. Ursula Matulonis** (Dana-Farber Cancer Institute, Harvard Medical School) whose research talk focused on the modern management of ovarian cancer. Speakers from the UCT fraternity included **Dr Francisca Loggenberg** (presentation title: LMIC: Ovarian cancer management – are we fulfilling standard of care?), **Dr Malika Patel** (presentation title: Fertility options in the younger cancer patient), **Dr Nicole Morse** (presentation title: Pathology of ovarian cancer). **Ms. Frances Reid** (World Ovarian Cancer Coalition) gave an update on the “Every Woman study LMIC”. This event was attended by >140 colleagues from regions within South Africa and neighbouring countries.



Dr Tracey Adams, Dept. Obstetrics & Gynaecology, UCT, speaking of the reasons for the Ovarian Cancer Awareness Day webinar

The **Department of Radiation Oncology** hosted the grand opening of the new Linac (linear accelerator) Suite on 26<sup>th</sup> June. This machine will allow introduction of true stereotactic radiotherapy of the brain and the body.



The Department of Radiation Oncology’s Ms Nanette Joubert (physicist), Dr Nomafrench Mbombo (the MEC for Health) and Prof. Jeannette Parkes (HOD Radiation Medicine) with the new Truebeam Linear accelerator

Student and faculty presentations/conferences/meetings

**Prof. Richard Naidoo** attended the single cell meeting (**scNL Annual Meeting 2023**) which was held on April 6th, in Leiden, Netherlands. The meeting consisted of one keynote presentation, invited talks, selected talks, and posters. The meeting was attended by all scientists from the Netherlands working in the single cell world. <https://www.singlecell.nl/events/annual-meeting-2023>

**A/Prof. Estelle Verburgh** attended the **49th Annual Meeting of the European Society for Blood and Marrow Transplantation (EBMT) in Paris** from April 23<sup>rd</sup>-26<sup>th</sup>. This is one of the most important events on research and education in the field of blood and marrow transplantation and cellular therapy.

In anticipation of the International Donor Registry Conference (IDRC) and the World Marrow Donor Association (WMDA) meetings that will be hosted by the South African Bone Marrow Registry in June 2024 in Cape Town, **A/Prof. Estelle Verburgh** attended the **IDRC & WMDA Global Meetings in Frankfurt**, from June 18<sup>th</sup>-21<sup>st</sup>. This is a gathering of the scientific community involved in cellular therapy and stem cell donation used to fight blood cancer and other blood disorders.

**A/Prof. Jessica Opie** attended the **British Society of Haematology Annual Scientific Meeting in Birmingham** April 23<sup>rd</sup>-25<sup>th</sup> and presented two posters:

i) Hodgkin lymphoma: The role of EBV plasma viral load testing in an HIV endemic setting. J. Opie, E. Verburch, J. Oosthuizen Z. Mohamed, D. Chetty, D. Hardie.

ii) Hodgkin Lymphoma: Circulating Natural Killer Cell Subsets in an HIV Endemic Setting. J. Opie. E. Verburch, J. Oosthuizen, Z. Mohammed, D Chetty, G. Davison.

### Research news (grants, partnerships, awards/honors)

**A/Prof. Shaheen Mowla** was the recipient of a grant from the Poliomyelitis Research Foundation for the project entitled **“The Multi-layered control of PD-L1 expression in immune evasion within an Epstein-Barr virus and HIV positive milieu”**

The Division of Haematology, UCT (Departments of Medicine and Pathology) have appointed **Dr Zeena Mohamed Fuad** as a new supernumerary fellow in Clinical Haematology.

**Prof. Richard Naidoo** completed a 5-month sabbatical at The Radboud University Medical Center, the teaching hospital affiliated with the Radboud University Nijmegen, Netherlands, and was based at the Institute for Molecular Life Sciences. The departmental research activities are related to the broad area of single cell RNA sequencing assays and various new single cell applications.

The focus of his sabbatical was to complete the whole exome sequencing (WES) aspect of the HIV+ Vs HIV- cervical cancer samples evolving from his PhD student’s project (Dr Omotola Abdulmalik). This work was done in collaboration with Dr Yutaka Negishi (Postdoc in the Mhlanga Group in the Institute of Molecular Life Sciences). The most interesting finding from this project was : 1. a strong association found between the HIV+ samples with HPV 35 variant in the sample cohort and 2. Identification of missense mutations in 81 genes from the sequencing assay. Dr Abdulmalik is currently investigating the molecular pathways in which these genes are embedded.

### Cancer Prevention and Control (CPC), MPH module

The cancer prevention and control module in the Masters of Public Health program, run by convener **Prof. Jennifer Moodley**, and teaching assistant **Ms. Alexandra Payne**, wrapped up in June 2023,. The module provides

an introduction to the principles of cancer prevention and control, and covers a broad range of topics including: the global burden of cancer, applied cancer epidemiology, cancer genetics, risk factors, prevention, screening, surveillance and cancer registries, behavioural and lifestyle interventions, challenges in providing cancer treatment, childhood cancer, palliative care, survivorship advocacy and cancer control plans. The module takes an interdisciplinary applied approach. Teaching staff included clinical, public health and basic science experts. This year’s iteration of the course saw 12 students and 1 observer, ranging from multiple tracks within the School of Public Health MPH program including epidemiology and biostatistics, social and behavioural science, health economics, health systems, and community eye tracks.



MPH CPC Class of 2023

### African aWAREness of CANcer and Early Diagnosis (AWACAN-ED) Project

The second quarter of 2023 has seen the NIHR funded African aWAREness of CANcer and Early Diagnosis (AWACAN-ED) Project reach 75% of the cross-sectional data collection, start data collection for the health facility assessments and pilot the in-depth interviews. The cross-sectional survey measures time-intervals from symptom awareness to referral and diagnosis for breast, cervical and colorectal cancers. The health facility assessment will take stock of current capacities and services for breast, cervical and colorectal cancer diagnosis, including human resources, infrastructure and relevant protocols and policies. The aim of the in-depth interviews is to map current practice of health workers and their perceptions of barriers and facilitators in cancer triage, possible diagnosis, and referral of patients with symptoms of breast, cervical or colorectal cancer across health facilities. We would like to thank our exceptional research team and collaborators for the high-quality data that has been collected, and their continuing dedication and hard work.

## Student news and graduations

**Thando Kubheka and Dylan Cheddie**, 1st year MSc students, were the recipients of a mini-research grant from the **NIH Fogarty South Africa HIV Haematology and Transfusion Medicine Research Program**.

The following MSc students were awarded NIH Fogarty scholarships:

- **Jihaan Isaacs**, supervised by A/Prof Jessica Opie and Prof. Glenda Davison (CPUT). Project Title: *The role of NK cells in the oncogenesis of HIV related Hodgkin lymphoma*.
- **Nonhlanhla Mabuza**, supervised by A/Prof Estelle Verburgh and Dr Katherine Antel. Project Title: *Application of a transcriptional diagnostic assay for the diagnosis of HIV lymphoma in a developing country*.
- **Maxine Van der Schyff**, supervised by A/Prof. Estelle Verburgh and Dr Katherine Antel. Project title: *The establishment of a hematological biobank*.

**Dr David Richardson**, registrar in Haematology Pathology passed the final CMSA specialist examination FCPATH (Haem)

## PGCRI Update

The Postgraduate Cancer Research Initiative (PGCRI) group is under the umbrella of the Cancer Research Initiative in the Faculty of Health Sciences, UCT. The PGCRI serves as a platform for PG students involved in cancer-related research to develop long term interdisciplinary collaborations, learn new skills, and discuss novel ideas. Formed in 2015, the PGCRI has primarily served as a mentorship program designed and run by PG students with the needs of students in mind. The group is supported by the CRI director and is led by a small team of masters and PhD students.

To date, the group consists of 132 members and the PGCRI group aims to offer a variety of activities to support students on their PG cancer research journey. This year the PGCRI is planning seminars, informal coffee discussions, cross-disciplinary laboratory/clinic visits, quiz nights and the annual 3-minute thesis competition. If you are interested in being part of PGCRI please fill in the following form:

<https://forms.gle/ezH4z1NPMxogRpY18>

and if you have any further queries please contact the PGCRI via email: [cric.postgradgroup@uct.ac.za](mailto:cric.postgradgroup@uct.ac.za)

## Upcoming Events

The **SAMRC/UCT Gynaecological Cancer Research Center, Cancer Research Initiative, Department of Obstetrics and Gynaecology and Department of Family, Community and Emergency Care** will be hosting a hybrid seminar series presented by **Dr Felicia Knaul**, international palliative care specialist and health economist, who will be visiting the Faculty of Health Sciences. The seminars will be hosted on July 11<sup>th</sup> and 13<sup>th</sup>

**UNIVERSITY OF CAPE TOWN**  
FACULTY OF HEALTH SCIENCES  
Dept Obstetrics & Gynaecology

**samrc**  
Gynaecological Cancer Research Centre

**Felicia Knaul**  
Interdisciplinary palliative care

**SEMINAR SERIES (hybrid)**

Dr Felicia Knaul, international palliative care specialist and health economist, will be presenting a seminar series in the Faculty of Health Sciences.

- "Lancet Commission on Palliative Care" 11 July 2023, 13:00-14:00
- "Closing the Cancer Divide" 13 July 2023, 13:00-14:00
- "Gender based violence" 13 July 2023, 17:15-18:00

Dr Knaul is internationally recognised for her transformative, translational research in global health, health systems, and health economics focused on reducing inequities. Her research has influenced policy and improved the condition of at-risk populations in low- and middle-income countries and especially Latin America. Her work is focused on access to pain relief and palliative care, cancer and especially breast cancer, violence against women and children, health systems and reform, health financing, women and health, medical employment, poverty and inequity, female labour force participation, and at-risk children and youth.

**Cancer Research Initiative**  
CPD accredited

**FaCE**  
Building Inclusive Communities of Care Together

**Tuesday 11 July 2023 13:00- 14:00**  
Seminar Room, Dept Obstetrics & Gynaecology  
MS Teams  
Meeting ID: 338 759 559 340  
Passcode: ma2bnf  
<https://tinyurl.com/Scnhsap>

**Thursday 13 July 2023 13:00- 14:00**  
Neuroscience Auditorium, GSH  
MS Teams  
Meeting ID: 351 424 450 452  
Passcode: naAJCI  
<https://tinyurl.com/TK3137>

**Thursday 13 July 2023 17:15- 18:00**  
Seminar room, Dept Obstetrics & Gynaecology  
MS Teams  
Meeting ID: 352 953 643 232  
Passcode: CjzG23  
<https://tinyurl.com/Tn1370bs>

## Recent Cancer Publications

1. Akinrinmade O.A., Jordaan S., Nsole Biteghe F.A., Padayachee E.R., Barth S. – Fusion proteins for the detection of apoptosis. United States Patent US11572547 (2023)
2. Dogbey D.M., Sandoval Torres V.E., Fajemisin E., Mpondo L., Ngwenya T., Akinrinmade O.A., Perriman A.W., Barth S. – Technological advances in the use of viral and non-viral vectors for delivering genetic and non-genetic cargos for cancer therapy. Drug Delivery and Translational Research: (2023), doi: 10.1007/s13346-023-01362-3
3. Lu M., Shao W., Wu P., Fan Y., He H., Barth S., Zheng A., Liang X.J., Huang Y. – Antitumor synergism between PAK4 silencing and immunogenic phototherapy of engineered extracellular vesicles. Acta Pharmaceutica Sinica B (2023), doi: 10.1016/j.apsb.2023.03.020.
4. Denny L. Coping with cancer recurrence: my perspective as both a patient and oncologist. Cancer.net. 2023
5. Brown BP, Feng C, Tanko RF, Jaumdally SZ, Bunjun R, Dabee S, Happel AU, Gasper M, Nyangahu DD, Onono M, Nair G, Palanee-Phillips T, Scoville CW, Heller K, Baeten JM, Bosinger SE, Burgener A, Passmore JS, Heffron R, Jaspan HB. Copper intrauterine device use induces depletion of Lactobacillus crispatus in the female genital tract microbiota in a randomized trial. Nature Comm 2023; 14: 499.

6. Denny L. Cervical cancer can be beaten – the key is vaccinating young girls. *The Conversation*, 2023; April 10
7. Sharma K, Machalek DA, Toh ZQ, Amenu D, Muchengeti M, Ndlovu AK, Mremi JA, Mchome B, Vallely AJ, Denny L, Rees H, Garland ZM. No woman left behind: achieving cervical cancer elimination among women living with HIV. *The Lancet*, May 11 2023; [https://doi.org/10.1016/S2352-3018\(23\)00082-6](https://doi.org/10.1016/S2352-3018(23)00082-6)
8. De John KO, De Quintal H, Mathibe MD, Albertus N, Opie JJ. A rare case of acute megakaryoblastic leukaemia with constitutional ring chromosome 21. *British Journal of Haematology*. 2023 Jun 6. doi: 10.1111/bjh.18892. Epub ahead of print. PMID: 37280183.
9. Golding TM, Omondi RO, Biswas S, Chakraborty S, Prince S, Smith G (2023) Quinolyl-based PGM metallarectangles: Antiproliferative activity, DNA and BSA protein interactions and a molecular docking perspective, *ChemBioChem*, <http://dx.doi.org/10.1002/cbic.202300271>.
10. Higgins G, Higgins F, Peres J, Lang DM, Abdalrahman T, Zaman MH, Prince S, Franz T (2023) Intracellular mechanics and TBX3 expression jointly dictate the spreading mode of melanoma cells in 3D environments, *Experimental Cell Research*, 428 (2023) 113633.

Please send any cancer-related news, events, publications and conference information for the period July – September 2023 for inclusion in our next quarterly newsletter to:

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