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A picture of me delivering the oral presentation

The International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting and Exhibition is the largest conference on MRI in the world. It attracts researchers from all over the world across many disciplines including technical, pre-clinical, clinical, and everything in between. Several thousand delegates attend ISMRM every year and present their work on a broad range of topics across MRI including the application of MRI in oncology. This year's ISMRM was held in Africa for the first time, enabling attendance from many colleagues who otherwise would not be able to attend. A major theme of this year's, and previous years, is the push to bring MRI to low and middle-income countries for equitable access to medicine. Another theme was *Ubuntu*, that translates to, 'I am, because we are'.

A major theme of this year's ISMRM was bringing MRI to low and middle-income countries through technologies such as portable ultra-low-field MRI, an area I have also been actively involved in. Moving to the radiation therapy specific side of things, an idea that was discussed at length with colleagues was the push for real-time volumetric MRI for treatment guidance. The clinical motivation of this is that patients move in real-time, during treatment delivery, and we want the radiation to only hit their cancer. To do this, we need fast, accurate, three-dimensional images of their internal anatomy to allowing downstream tracking technologies to localise where the cancer is. The eventual goal is to have the radiation beam continually adapting to the patient as they move to improve treatment outcomes. Attaining this has been a significant technical challenge for well over a decade but recently there has been exciting work proposed to overcome these challenges. In particular, the application of artificial intelligence (AI) has enabled much of this recent work. These ideas were presented and discussed at length at this year's ISMRM through posters, oral presentations, and study group meetings. I was fortunate enough to meet two leading research groups who are working on this problem.

ISMRM was a six-day conference including two educational days. In the educational sessions, I mainly learnt advanced image reconstruction techniques as these are most applicable to my current research interests in MRI-guided radiation therapy. I also attended the low-field and the

interventional/MRI-guided radiation therapy study group meetings. These were invaluable as they included guided discussions from leaders in these fields and networking with delegates working on similar research projects to my own. Attending the scientific sessions allowed me to stay up to date with the latest research. Specifically, attending the interventional MRI sessions and image reconstruction sessions allowed me to discover what other research groups are focusing on.
Additionally, as I am nearing the end of my PhD, I was able to network with other research groups and discuss postdoctoral research opportunities.

I noticed another trend at this year's ISMRM – there was a move away from *in-silico* experimentation to the clinical deployment of AI. This is a major step forward and directly applicable to my research. While I have demonstrated a promising framework for future anatomy prediction on retrospective treatment data, the next step would be to deploy this on a clinical MRI-linac. This real-time deployment would be beneficial in assessing the feasibility and utility of my research bringing it closer to the clinic and ultimately how patients are treated. At this year's ISMRM, I was able to discuss with colleagues who have crossed this translational barrier for MRI-guided radiation therapy. The technical expertise these colleagues have will be crucial for our own translational pathway as they work on the same machines that we work on. The opportunities to collaborate are plentiful here.

A personal highlight of the conference was receiving the *Summa Cum Laude* award. This award is given to trainee delegates whose abstracts scored in the top 5% of a major review category. A personal highlight of Cape Town was visiting Robben Island and Table Mountain. I would like to thank Sydney Cancer Partners sincerely for funding this opportunity.