Report of James IV Travels

GB Mann, UK Traveller, 2009

I am a surgical oncologist with special interest in breast cancer and melanoma in Melbourne Australia. A major reorganisation of cancer services is planned for Melbourne with the re-building of the Peter MacCallum Cancer Centre close to The Royal Melbourne Hospital, and Royal Women's Hospital, the University of Melbourne and the Walter and Eliza Hall Institute for Medical research. The objective is to create a Comprehensive Cancer Centre.

When I was awarded a James IV Fellowship, I used the opportunity to see how cancer care is delivered in a range of centres and how research is integrated into clinical care. I travelled alone for the last 2 weeks of October 2009 in Ireland and Scotland, and then from late November my wife and three small children also came to North America. The family stayed in Houston for most of the time where my wife was born and where her parents and extended family live.

The weekend before I left, I had afternoon tea with Mr Donald 'Scotty' Macleish a senior member of the James IV association who was a traveller in 1973. Scotty was instrumental in me choosing surgery, when my undergraduate inclination had been to pursue a career in internal medicine. For that influence I will be forever grateful. He is a wonderful raconteur, and he gave me a primer in Scottish history and in particular about James IV. After hectic preparation over the weeks prior to the trip, it was a relief to reach the lounge at Melbourne airport for the journey to Dublin.

Dublin

Professor Arnold Hill was my host in Dublin, and he arranged a hectic schedule. After a day adjusting to the time zone, viewing the Book of Kells in Trinity College, and hearing a WB Yeats poetry reading in the National library, my travels began. A video-conferenced research meeting between Beaumont Hospital and the laboratories at the RCSI was followed by the weekly grand rounds where. This was well attended by students, residents, registrars and consultants and was video-conferenced to 2 other RCSI medical school sites around Ireland. As I spoke on current issues in sentinel node biopsy, Prof Hill used techniques he learned from Murray Brennan while a Fellow at Memorial to keep students, residents and consultant surgeons awake and alert.

We then had a meeting where students presented the patients to the Professor of Surgery. It was refreshing to see this close association between surgeons and students, unlike the situation in many Australian hospitals where busy surgeons have less contact with students. The RCSI appears to have managed to modernise its curriculum and adopt modern educational philosophy while maintaining the strengths of traditional surgical education. I was shown an interactive website developed by Dr Mark Corrigan, a specialty registrar at Beaumont, where each student is required to log on and list what they learnt for the day and who had taught it to them. These facts are then confirmed by another student before being loaded into a searchable database. It is possible to track who has done the teaching – woe-betide the registrar who is 'out-taught' by the intern!

A group of residents and medical students then presented their research projects. Most were doing research as this has become necessary to enter surgical training. The projects were split between basic science projects – co-supervised by Prof Hill and a full time laboratory scientist – and projects

relating to medical education and assessment. This was a particular focus as the RCSI runs a medical school, rather than simply being responsible for post-graduate surgical education.

The afternoon was spent with Mr Denis McEvoy, head breast surgeon at BreastChek – Ireland's national Mammographic screening program – at St Vincents Hospital. We toured the hospital and University College Dublin Medical School, talking widely about breast cancer and its management in our respective sites. The same debates and discussions occur.

Friday started with the Breast Unit multidisciplinary (MD) meeting at Beaumont. This was the first of many MD meetings I attended, and was valuable. The philosophy and dynamics of the units become clear in these meetings. MD meetings have become standard throughout the UK and Ireland, with mandates that all cases must be presented at such a meeting. Australia is moving in this direction, whereas at most North American Centres I visited, the volume of cases was such that presenting all patients at a MD meeting was considered not only impossible, but also unnecessary.

Much of the day was then spent around the RCSI. Mr Derek Young, the Head of the Centre for Innovation and Surgical Technology, outlined the centre and its role in assisting surgeons with ideas to rigorously assess whether there might be commercial value, and if so helping to develop them into products. Other presentations were by trainees undertaking research projects relating to surgical skills and surgical education. Dr Hazem Hseino then took me down to the skills lab, where he is undertaking research on the endovascular simulator. I did my first and only angioplasty of a stenotic renal artery.

The weekend was spent in the beautiful wilderness of western Ireland in the Connemara, just northwest of Galway.

Galway

In Galway I was hosted by Prof Michael Kerin. A tour of the hospital was followed by a meeting with research students – mainly focussing on microRNAs in breast cancer and their possible prognostic significance, but covering a variety of topics, including one correlating digit length ratios to breast cancer incidence! We then had an excellent dinner and a pint with Dr Gerry O'Donoghue who had recently completed a Fellowship year with us in Australia. I presented at Grand Rounds the following morning, watched Gerry do a total thyroidectomy, then headed back to Dublin.

I met Prof Kevin Conlon at Tallagt Hospital, where he has established a busy surgical oncology service with a focus on pancreatic cancer. Ireland has been going through a major review of cancer services over recent years, and it is likely that pancreatic cancer will be one of the diseases to be managed at dedicated sites. Tallagt may not be one of the designated sites, and it was interesting talking to Kevin and his staff about the reform process and likely impact of these changes. With major cancer reforms being discussed in Melbourne, it was an interesting conversation.

Scotland

After a very early start to get the first flight to Edinburgh I was pleased to be met by Prof Alistair Thompson at the airport who then set me up for a days sightseeing. Two highlights were Edinburgh Castle with its various references to James IV, and the museum of the College of Surgeons of Edinburgh. This fascinating museum outlines the history of the College from being granted the Royal

Charter by James IV in 1505, and is very much a museum of the history of modern surgery. The work of Mr James Syme, without anaesthetic, was remarkable – even though his full morbidity and mortality was not presented! It was also interesting that this man, clearly the leader at the time, was profoundly sceptical that anaesthesia would play a role in the future of surgery. Prof James Garden graciously hosted dinner with two other James IV travellers – Alistair Thompson and Rowan Parks - with fine food and wine and lots of conversation until far too late. Then up to Dundee with Alistair.

Dundee

In Dundee there is a close association between the Ninewells Hospital and the University of Dundee. The Department of Surgery is combined with that of Molecular Oncology – an association that commenced when Sir David Lane, discoverer of p53, was in Dundee. A close association between the Breast Unit in particular and the basic science program continues.

My schedule involved meeting people from the science side, the clinical side and those trying to bridge the gap. A new Clinical Research Centre is to act as a site for all sorts of research involving patients. A dedicated research PET/CT will soon be commissioned to provide many research opportunities. Phil Quinlan is a computer scientist who both runs the IT side of the breast cancer database while doing a PhD in informatics of tissue data bases. The combination of a dedicated surgeon, dedicated pathologist and this IT expertise is clearly the approach for effective tissue collection. I also visited IMSAT, a centre for technical innovation established by Prof Cushieri. This is an initiative to bring together engineering and medicine to develop new medical devices. There are divisions focusing on light (photonics) and sound (ultrasound) and also MRI. Again, different disciplines brought together to allow innovation.

Dr John Dewar is a clinical oncologist who directs the clinical breast program. He and Alistair Thompson have built this program up over years. The MD meeting is a very smoothly organised meeting where each person knows what is expected and where treatment recommendations are efficiently made for a large number of patients.

Alistair showed me some highlights of Scotland over a very wet and cold weekend. I visited the Discovery, Robert Falcon Scott's ship that he took on his first Antarctic expedition. There is a wonderful museum there and in the museum shop I found a book I had long been searching for – "Limeys" - an account of how scurvy was addressed in the Royal Navy. A key part of the story is that of the randomised clinical trial conducted by James Lind that showed that citrus treats scurvy. Despite this positive clinical trial with sample sizes of only two, it took 50 years to be accepted by those in authority – a stark contrast to today's situation where trials of 9000 patients demonstrate marginal clinical differences (which are statistically very significant) which are rapidly translated into clinical practice. Other highlights were a visit to the smallest distillery in Scotland and a visit to Stirling Castle with its Great Hall built by James IV.

Edinburgh

The final two days of this part of the travels were in Edinburgh. Mr Udi Chetty, Miss Elaine Anderson and Mr Matthew Barber were excellent hosts. I spent most time with Mr Chetty and I was

gratified to see that we agreed on just about everything! I also visited the Royal Infirmary to meet Penny Earle, who had been so helpful in arranging my travels.

The Breast Unit at Western General Hospital was established by Sir Patrick Forrest and was one of the very first specialist units. Many Australians have trained here and it was good to find that they are generally well regarded. It was interesting that when discussing the possibility of Fellows from Edinburgh coming to Melbourne, the main issue was the need for them to receive 'oncoplastic' training. While understandable, it seems a pity that the focus is on a technical aspect rather than on the management of cancer. Surgeons need to work hard to maintain a leadership position in the care of patients with cancer. While MD care is undoubtedly good, there is a danger of care being demarcated on discipline lines which may not be always to the patients' best advantage.

A final highlight was a public lecture held by the Edinburgh Breast Cancer Institute, the fund-raising arm of the Breast Unit, at the royal College of Physicians Building and delivered by Professor Peter Boyle from Lyon. His topic was "How to prevent cancer". He spent the first half of his talk on tobacco – showing how the epidemic started and has waned in the Western countries, but how it continues to affect the most disadvantaged in Scottish society. He then presented frightening figures regarding smoking in China. The combination of high smoking rates and air pollution threaten a true catastrophe in the coming decades if not addressed soon. Just as the audience was wondering if he was going to address breast cancer at all, Prof Boyle then moved on to give an excellent overview of the evidence of breast cancer aetiology with excellent clinical and public health perspective. We should tell our patients to moderate alcohol, avoid weight gain and continue to exercise. Reproductive behaviour is also important; while encouraging teenagers to have a baby might reduce their risk of breast cancer, it is hardly acceptable as public policy, encouraging new mothers to breast feed is could reduce the amount of breast cancer in the future.

<u>North American Travels</u>

During 3 hectic weeks between returning from Scotland and leaving for Houston, work was tidied up, a contract for a home renovation was signed, and I hosted the annual scientific meeting of the Clinical Oncology Society of Australia. Needless to say, much of the preparation was done by my wife, Julie Miller.

We were all very pleased to be on the way to Los Angeles for a few days rest at Disneyland, before spending Thanksgiving with Julie's family in Houston and settling the children in to their school for the next two months. Our plans were thrown out somewhat when I developed severe lower abdominal pain while at Disneyland. An unpleasant experience of the Californian health system revealed it was renal colic. Fortunately the stone passed.

Boston

My first destination in North America was Boston where I spent a week hosted by Prof Michael Zinner, Chief of Surgery at Brigham and Women's Hospital, and Dr Judy Garber of the Dana Farber Cancer Centre. An overwhelming impression was how welcome I felt and how willing people were to find 30-60 minutes in their schedules for me. Excellent entertainment was again a highlight, with dinners with Brigham surgeons hosted by Prof Zinner and with Dr Garber and members of the Breast Service.

My week started with a seminar to the Brigham Dana Farber Breast Oncology group. I spoke on "Lessons learned form 20 years of mammographic screening" - a combination of an account of Australia's mammographic screening program and a series of our research projects that have been recently published or are in manuscript preparation phase. The talk was particularly timely, as the National Preventative Health taskforce had issued its report recommending changes in the approach to mammographic screening the previous week. This report was met with vehement, verging on hysterical reaction in parts of the media. My talk seemed to be well received, with the audience listening intently and incisive questions coming from various members of the audience.

An objective in visiting Boston was to see how the Boston hospitals have developed a cooperative cancer centre a number of independently competing large hospitals. This challenge will face us in Melbourne as we attempt to form Australia's first Comprehensive Cancer Centre. The parallels between what has happened in Boston with the large busy general hospital (the Brigham) joining with the specialist small (relatively) cancer hospital (the Dana Farber) and what will happen in Melbourne are striking. I heard the perspective of a range of people, from the Chair of the Department of Surgery, Vice President of the organisation, senior clinicians in various fields and administrative staff. I was particularly interested in their views on what was done well and not so well, and what should be done and what should be avoided when going through this process.

I have long thought that the easiest part of our CCC development will be the buildings and the hardest part will be to integrate the services to create something much better, and to genuinely combine the clinical and research enterprises. The danger will be that a series of turf wars will threaten to derail that project. This view was reinforced in Boston, and it is clear that the process will take many years but can eventually be successful. The example of the Breast Service, under the leadership of Dr Eric Winer, reinforced my view that to forge a single service across a number of hospitals requires a clinical leader to be appointed and supported. Strikingly, the clinical leaders across the DFBW CC are generally not surgeons. The surgeons are clearly excellent and very busy, but their role seems to be largely confined to the technical aspects of breast surgical oncology rather than being overall leaders in cancer care. Symptomatic of this was the fact that a NEJM editorial on the issue of screening mammography, clearly subject potentially in the realm of the surgical oncologist, was authored by two Medical Oncologists from Dana Farber.

Dr Atul Gawande's recent work on pre-op surgical checklists has had a great impact around the world, and it was good to hear from Atul and his research fellows of plans for further work. Surgeons are expected to carry all possible emergency situations and their management in our heads and to know how to react instantly, whereas in many other industries, checklists are used to maximise safety. I personally recall situations, especially while managing acute trauma, where a checklist would have been most welcome. Some surgeons may believe that properly trained surgeons have the knowledge and experience to manage emergency situations so a checklist would not help - it will be interesting to see where the field develops over the next few years.

New York

I spent 3 days in New York in early January. Like many James IV travellers before me, I enjoyed the hospitality of Professor Murray Brennan, staying in his apartment on 68th St. Thirteen years earlier I had left after an enormously stimulating and formative 18 months as the International Surgical Oncology Fellow, and in many ways it was like returning to my academic home. Much had changed,

but many things had also remained the same. The amount of building that has occurred is remarkable, with new operating rooms, research laboratories, disease-specific centres etc. The feel around the institution of being a centre for world leading research and clinical care with an explicit dedication to cancer is unchanged, as is the recognition of the importance of surgery and the role of the surgical oncologist.

Professor Murray Brennan, Dr Ron deMatteo and Dr Monica Morrow organised an excellent program. I spent a day in the new Breast Centre, and a day around the main centre. It was an honour to give talks at the Memorial Breast Conference on "The false negative sentinel node" and the General Surgical Oncology conference on "Lessons learned from 20 years of Mammographic screening". It felt something like a dissertation on my achievements since Fellowship. Having gracious hosts, I was assured that I acquitted myself adequately.

The nature of laboratory research in which surgeons are involved seems to have changed. Fewer surgeons are running an independent laboratory, manned by top quality surgical residents undertaking research time and more surgical investigators are embedded in a science lab whose interest is complementary to, or at least relevant to, the surgical discipline. This approach fits with what I have been working on in Australia and I believe it is inevitable that this trend will continue.

Toronto

After New York I spent a week in Toronto, hosted by Professor Richard Reznick and Dr Andrew Smith. Many advised against visiting Canada in early January. I am lead to believe that I was lucky in that the temperature was a mild -10C much of the time and the wind chill was similarly mild. A previous resident and Fellow of mine, Dr Robert Tasevski, is in the last 6 months of his Surgical Oncology Fellowship, and so I was again the recipient of wonderful hospitality.

The Canadian health system has many similarities to the Australian one. This may be due to shared background, similarities in our political system, or an accident of history. The similarities between the medical scenes in Toronto and Melbourne were also quite marked with a number of independent hospitals cooperating to produce better outcomes.

An excellent program was put together for me, with time at Sunnybrook and around Princess Margaret and Mt Sinai. Sunnybrook is some distance from the downtown hospitals, and each of the centres is big enough to be able to manage the vast majority of medical conditions independently. Some subspecialty areas are centralised – the difficult recurrent pelvic cancers and retroperitoneal sarcomas are referred to Dr Carol Swallow's unit, for instance. The formation of a combined Fellowship program over recent years, with the Fellows spending time at each of the institutions, seems to have had an effect of promoting cooperation between institutions.

I observed many initiatives that may be relevant to Melbourne. Sunnybrook has identified its role in the health system and organised its services accordingly. General Surgery is divided into Trauma and Surgical Oncology. When I asked about routine general surgery – gallbladders and hernias – I was advised that they were done elsewhere, in community hospitals more suited to delivering this type of care. Dr Fred Brenneman, Director of Trauma at Sunnybrook, described their recent introduction of an Acute Surgery roster and Unit to address the problem of a subspecialised group of surgeons providing General Surgical cover to a busy Emergency Department.

I was able to visit the Wilson Centre for educational research and also the Skills Laboratory at Mt Sinai Hospital, and saw how formal surgical skills training has been introduced into the surgical curriculum at an early stage. The challenge of applying the science of surgical education to the practice of surgical training was the topic of interesting discussion.

The hospitality was again a highlight, with a wonderful dinner at the house of Professor Richard Reznick with Dr Robin McLeod and Dr Andrew Smith making it another James IV occasion. Andy Smith and family made sure that my weekend was full, varied and memorable and excellent seats at the Hockey to see the Maple Leafs the night before I left sealed a wonderful week.

Baltimore

I have long wanted to visit Johns Hopkins so took this opportunity. Dr Richard Schulick organised the visit and generously provided accommodation. The Chair of Surgery at Hopkins, Dr Julie Freischlag hosted another special dinner and provided insight into the challenges of guiding such a powerful and tradition-rich Department. While lost in the corridors of the Blalock building, I had the chance to look at the portraits of many past, present and future greats of American surgery. This tradition is inescapable and is clearly a great strength of Johns Hopkins. I appreciated seeing how the challenge of retaining the benefits of tradition while moving to an increasingly patient –focussed model of medical care is being addressed.

Dr Cameron hosted another dinner at the Maryland Club – close to the room where Dr Halsted once dined. Amongst the guests were Dr Ted Tsangaris, Head of Breast Surgery at Hopkins, Dr Charles Balch, Dr Richard Schulick and Dr Barish Edil. Dr Cameron was a wonderful host, with many stories about surgery, Hopkins, and life.

Houston

My final destination was Houston and its medical centre. I had not visited MD Anderson since 1993 when I was exploring sites for a potential fellowship, and had long wanted to visit. The size and scale of the MD Anderson Cancer Center is quite remarkable. The electronic wayfinding system providing step by step instructions on how to get to any destination was most helpful. Dr Raphael Pollock facilitated a varied visit, where I spent time with endocrinologists, radiation oncologists, pathologists, nurse practitioners, and medical oncologists as well as surgical oncologists. Professor Alastair Thompson from Dundee commenced a sabbatical at MD Anderson while I was visiting, and this gave us a chance to share thoughts and impressions.

The organisation of MD Anderson is clearly by tumour stream, and the craft-based departments appear to be set up to support this organisation. My impression is that it the surgeons' time is carefully managed so that they are mainly involved with the perioperative management and the surgery itself, with most of the diagnostic work , the adjuvant therapy discussions and decisions and the followup managed by others . While potentially a very efficient approach to Multidisciplinary care, this must pose a great challenge to the concept of the surgeon as leader in cancer care

Summary

The James IV Travelling Fellowship was a remarkable experience and I am grateful to the members of the association for awarding me this opportunity. I am at the stage in my career where life is

extremely busy, and it is rare to have the opportunity to sit back, observe and reflect on the way in which we are doing things and whether we could approach things differently.

My travels were particularly timely in light of the developments in cancer care occurring in my home state of Victoria, Australia. What I observed reinforced to me that the best system will have enlightened cancer clinicians as leaders, with the clinical programs intimately related to the research enterprise. Many times I observed that leadership in modern cancer care will no longer be automatically given to the surgeons, but that well trained and committed surgical oncologists are often the natural leaders.

Finally it was the personal aspect that was most rewarding and I believe will have the longest-lasting benefit. We are privileged to be in a profession whose aim is to benefit other people. Academic surgeons are especially privileged to be involved in both patient care and in the excitement of discovery. The James IV travelling fellowship allowed me to renew and deepen many existing friendships and to meet many new people with whom I share this passion. I feel truly fortunate to have had this opportunity and wish to thank the members of the Association.