

Dr Ian Ellul meets up with **Mr Gordon Caruana Dingli** to shine a light on breast cancer surgery. We then shifted our gaze to the Moon. Mr Caruana Dingli is consultant general and breast surgeon, Head of the St Agatha Breast Unit at Mater Dei Hospital and Chairman of the Department of Surgery.

Halsted, Méliès & Maltese Giants

EDWARD CARUANA DINGLI WAS AN EARLY 20TH CENTURY PROLIFIC MALTESE PAINTER. I HAVE ALWAYS WONDERED WHETHER YOU ARE RELATED TO HIM.

Edward was my grandfather's brother. The artistic streak has touched various family members, including my grandfather Robert who was also an artist, as well as my sister Debbie and her sons, and even my daughter Sarah who is a graphic designer. I also wonder whether the artistic heritage helps me in my work since oncoplastic breast surgery inherently draws from aesthetics.

WHY BECOME A DOCTOR AND LATER ON, DECIDE TO SPECIALISE IN BREAST SURGERY?

My interest in science was kindled when the US landed on the Moon in 1969. I remember staying up late, watching the event on television with my father. My passion for science was also gradually nurtured by the television series Star Trek. I carried my interest in science to school and I have always felt that my father envisaged me graduating as a doctor one day; he was, however, never explicit about this. At University the available courses were also limited back then, and this seems favoured the course of my fate to become a doctor.

I opted for surgery early on because I was always inclined to work with my hands, an aptitude which I had since my childhood days, enjoying building and making things with my hands. My initial training was general surgery, but, after training in the UK, I worked with Mr Charles Swain who influenced me greatly and I am deeply indebted to him. He wanted to improve the care of breast cancer patients and thus, he set up the Breast Clinic in 2000 where all breast cancer cases would be managed by a multidisciplinary team including radiologists, pathologists, oncologists, surgeons and breast care nurses. In 2007 the national breast cancer screening programme



was also set up. Time showed the magnitude of the progress we managed to achieve. Suffice it to say that 20 years ago we had the worst results in Europe. Now we have a 5-year survival rate of breast cancer of 87% which is the highest in the EU.

YOU ALSO HELD THE POSITION OF PRESIDENT OF VARIOUS ASSOCIATIONS SUCH AS MAM, ASSOCIATION OF SURGEONS OF MALTA, AS WELL AS THE COMMONWEALTH MEDICAL ASSOCIATION. CAN YOU GIVE SOME MORE DETAIL?

MAM's purpose is two-fold, serving as a trade union, being one of the oldest and most effective ones, as well as an association of doctors. Dr Martin Balzan, the current President, would agree with me in saying that MAM has been instrumental in our evolving healthcare systems, championing healthcare quality measures in a proactive manner.

The Association of Surgeons of Malta is far smaller than MAM. Whilst recognising the importance of training abroad, one of our landmark contributions was the implementation of the local training of our surgeons. The current President is Professor Joseph Galea.

On the other hand, the Commonwealth Medical Association comprises 54 countries who find convergence in the use of English language, and systems of governance and healthcare based on the British system, but differ in size, GDP and health equalities. Great efforts are being done to implement digital innovations to overcome such inequalities.

CAN YOU SINGLE OUT A DEVELOPMENT IN MEDICINE WHICH PROVED TO BE SEMINAL SINCE YOUR GRADUATION IN 1984? MAYBE THE CONCEPT OF 'EVIDENCE-BASED MEDICINE' COINED BY PROF. GORDON GUYATT? THIS WAS TO BE A 'PARADIGM SHIFT', AS HE EXPLAINED IN HIS PIONEERING PAPER OF 1992 AT MCMASTER UNIVERSITY.

I agree. We strive to provide the best care to patients, based on research. Today we also see subspecialisations. We have currently just appointed a hepatobiliary surgeon, for example. Evidence-based practices show that these subspecialisations translate into better results. Screening is also part of the equation leading to better survival rates; in surgery we screen for breast and colonic cancer and aortic aneurysm screening will soon be rolled out. Genetics are another important area which will probably lead to a shift to personalised treatments.

ONE CANNOT BUT REMEMBER HERE THE TRAGIC DEMISE OF NIRVANA AZZOPARDI, A POPULAR TV PRESENTER, WHO DIED OF BREAST CANCER AT THE TENDER AGE OF 40 YEARS IN 2013. NEWSPAPERS REPORTED ALLEGATIONS THAT THIS COULD HAVE STEMMED FROM A MISDIAGNOSIS BY HER OBSTETRICIAN. DO YOU CONSIDER THIS TO BE A WATERSHED MOMENT IN BREAST SCREENING LOCALLY?

Possibly yes, since the female population in Malta became aware that breast cancer affects younger women as well.

IN 1894, DR WILLIAM HALSTED AT THE JOHN HOPKINS HOSPITAL PUBLISHED HIS PIONEERING WORK ON RADICAL MASTECTOMY WHICH WAS CARRIED OUT IRRESPECTIVE OF TUMOUR SIZE, TYPE, OR PATIENT'S AGE. A CENTURY LATER ITS PODIUM PLACEMENT HAS BEEN REPLACED BY BREAST CONSERVATION THERAPY. KEY HERE ARE THE ADVANCES IN RADIOLOGY SUCH AS U/S GUIDED CORE BIOPSIES AND DIGITAL MAMMOGRAPHY. WHAT ELSE?

At that time, medics were not aware that their patients died from breast cancer, primarily from metastasis. Thus, with the conviction that the disease was localised to the breast area, they continued increasing the operation area until they reached radical mastectomy. This operation is notoriously associated with cosmetic disfigurement and limb disability. This was done with the aim of decreasing mortality. In my career I only performed it once for a patient with breast sarcoma.

The greatest evolution in breast cancer stemmed from two things. The first was tamoxifen which is a selective estrogen receptor modulator. The second arose from evidence-based medicine, as you correctly indicated before. An Italian research group conducted a clinical trial in the eighties. They randomised women with a small tumour size into two arms, one undergoing a mastectomy and the other having an excision followed by radiotherapy.

The results were equivalent. Further research along the years has shifted the balance, for small tumours, to breast excision followed by adjuvant treatment.

YOU MENTIONED TAMOXIFEN. THE ROAD FROM ITS MARKETING AUTHORISATION IN 1978 TO TRASTUZUMAB TWENTY YEARS LATER WAS LENGTHY AND BUMPY. ARE WE IN FOR A SMOOTHER RIDE?

In our field, the first hormonal therapy was tamoxifen which decreased mortality by 15% and the first biological medicine was trastuzumab which is a monoclonal antibody. Since then there have been newer drugs. In Malta we see 350 new cases of breast cancer yearly, and 60-80 yearly deaths. We see a heavy international R&D investment in this area precisely because research is profit-driven which in turn relies on lengthy treatments which is the case in breast cancer. Screening also helps by detecting the disease at an earlier stage. We are, in fact, seeing a faster market launch of new technologies and medicines, which may well translate in a shift to less invasive ablation interventions, followed by genetic testing and biologicals.

DO YOU RECOMMEND PREVENTIVE MASTECTOMY FOR WOMEN CARRYING THE BRCA1 AND BRCA2 MUTATIONS?

When patients with a family history of breast cancer get referred to us, risk reduction surgery is clearly explained with its inherent limitations and if need be, they are referred for genetic counselling. If the geneticist then agrees that there is a considerable risk, we perform genetic testing to investigate the mutations and then, if indicated and the patient agrees, we proceed with the operation.

SOME TIME AGO I DISCUSSED AT LENGTH THE TOPIC OF SOCIAL DETERMINANTS OF HEALTH WITH PROF. SANDRO GALEA WHO IS DEAN AT THE BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH, US. WHAT IS THEIR RELATION TO BREAST CANCER?

You touched an area which is close to my heart. I strongly believe that an investment in better schooling and housing, for example, has a major positive impact on health outcomes. In fact it has been reported in Malta, that for example, people with higher levels of education have higher overall longevity.

YOU CORRECTLY STATED THAT, ACCORDING TO THE OECD'S COUNTRY HEALTH PROFILE 2021 REPORT FOR MALTA, THE 5-YEAR SURVIVAL RATE FOR BREAST CANCER IS HIGHER THAN THE EU AVERAGE (87%). NOTWITHSTANDING THIS, THE MORTALITY RATE IS HIGHER THAN THE EU AVERAGE. IS ACCESS TO DRUGS THE REASON?

I do not think so. If a particular medicine is not available in the NHS, patients get referred to the Community Chest Fund. We certainly need more new treatments in the NHS but this is a political question. As discussed previously,

politicians need to gauge all social determinants of health before investing in a particular area.

IN KEEPING WITH THE ABOVE QUESTION, ACCORDING TO THE EU'S CLINICAL TRIALS REGISTRY THERE ARE ONLY TWO MULTI-CENTRE PHARMACEUTICAL CLINICAL TRIALS WHICH ARE CURRENTLY ONGOING IN MALTA. ON THE OTHER HAND, ESTONIA, HAVING A POPULATION OF 1.3 MILLION, HAS 250 ONGOING TRIALS, IRELAND 509 AND GERMANY 3909. WHAT ARE YOUR VIEWS ABOUT THIS?

I was not aware of this, and it worries me. We know for certain that patients receive better care during clinical trials because there is more dedicated monitoring, since this involves financial investment by the sponsoring company, besides the contribution to medical science. Only a few weeks ago the surgical department entered a series of EU multicentric clinical trials in various aspects of surgery. You are mentioning clinical trials on medicines which relate more to the oncologists. We should definitely do more to attract clinical trials to Malta.

ACTION FOR BREAST CANCER FOUNDATION AND EUROPA DONNA MALTA WROTE TO THE HEALTH AUTHORITIES LAST AUGUST ABOUT THE LONG WAITING TIMES FOR BREAST CANCER SURGERY. DO YOU SHARE THEIR VIEWS?

What they said was true and the reason for this is that our department was operating with a reduced number of anaesthesiologists and nurses due to the opening of the COVID-19 ITUs. However, we managed to reverse this and in October and November 2021 we managed to perform more operations than those performed during the same period in pre-COVID 2019. To do so, we increased operating times with later finishing times and also Sunday lists; Mater Dei hospital only has 20 theatres. We also reverted to leasing operating rooms from the private sector with a view to augment our operating capacity; our surgeons leave Mater Dei hospital during normal working hours to work in the private sector.

YOU RECENTLY PENNED *WE WENT TO THE MOON*, A BOOK WHICH DESCRIBES THE EVENTS LEADING UP TO THE MOON LANDING. IT REMINDS ME OF THE 1902 HALLMARK FILM BY THE INFLUENTIAL FRENCH FILMMAKER GEORGES MÉLIÈS' *LE VOYAGE DANS LA LUNE*, WHICH I HAVE SEEN OVER AND OVER AGAIN. WHY DID YOU DECIDE TO NARRATE THE POWER GAME BETWEEN THE US AND RUSSIA?

In 1969 the US landed on the Moon and since then, I developed an interest in space travel, buying books and reading on the power game, as you correctly stated, between President John Kennedy of the US and Premier Nikita Khrushchev of the Soviet Union. The race to the Moon was the driving force behind this show of superiority,

even if this meant spending 4% of the US's annual GDP on this quest.

The book discusses how this pioneering feat moulded Maltese culture. We have shops and even a hotel, named after Kennedy. Kennedy Grove is another example. Why was this related to one specific president? Kennedy was a staunch Catholic, but he was also telegenic with tousled hair and an air of youthful confidence, alongside a beautiful wife; he managed to achieve movie star status. One must consider the political background back then. He was elected President in 1960, just 15 years after WWII ended and space travel was sorely needed to alienate people from the current state of affairs and to project the image of a future technological age.

In the book, I narrate the experience of 50 Maltese people who saw the Moon-landing event; the general feeling was that 'we' (all mankind) went to the Moon (but the US paid for it). The book then proceeds to discuss the press and television coverage of the event, stamps issued to commemorate the landing and the Apollo-inspired art by the British artist Victor Pasmore who lived on our island at the time. I have also decided to include a Times interview with the Moon-walking astronaut Harrison Schmitt in 2009 during his visit to Malta, and the text of Kennedy's Moon speeches.

AT THIS STAGE I WISH TO COMMEMORATE THE LIFE OF PROF. FREDERICK FENECH AND HIS NEPHEW PROF. ALBERT FENECH WHO PASSED AWAY IN 2021. BUT I ALSO WISH TO REMEMBER DR VICTOR CALVAGNA, PAEDIATRIC ONCOLOGIST, AND DR ALBERT BEZZINA, OPHTHALMOLOGIST, WHO GRADUATED WITH YOU BACK IN 1984. THEY ALSO LOST THEIR BATTLES IN 2021. THESE ARE GIANTS ON WHOSE SHOULDERS WE STAND. CAN YOU SHARE YOUR MEMORIES?

I remember Albert Bezzina to be an intelligent and entertaining man. We used to have lengthy discussions on cars and astronomy, with Albert coming up with all sorts of theories. He was an excellent ophthalmologist and a true gentleman. Dr Victor Calvagna was a person of few words but the empathy which he radiated was admirable. His work led to a paradigm shift in the manner in which paediatric oncology patients were treated, with astounding results. I have always admired how he managed to keep serene, having the arduous task to deal with paediatric oncology patients.

ONE LAST QUESTION. WHAT DO YOU THINK OF CME30.EU?

CME30.eu is the future. Online learning saves so much time with respect to commuting and logistics. It is ironic that we realised this because of pandemic-led events. Obviously, meeting face-to-face has its networking advantages, but online learning will be ubiquitous in the future. Also, I must add that the magazine is well-executed.