THE T.J.D. LANE LECTURE

“DUBLIN TO DUBLIN – A THIRTY YEAR ENDOUROLOGICAL ODYSSEY”

AN ADDRESS GIVEN BY

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MB, BS, DRCOG (ENG), MS, MD, FRACS (UROLOGY)

AT

THE WILLIAM STOKES POSTGRADUATE CENTRE
ST JAMES’ HOSPITAL, DUBLIN

FRIDAY, 9TH SEPTEMBER 2016

• FOLLOWING THE LECTURE, THE T.J.D LANE MEDAL AND A PARCHMENT CONFERRING HONORARY VISITING PROFESSORSHIP OF TRINITY COLLEGE DUBLIN WERE PRESENTED TO A/PROF WEBB BY PROFESSOR THOMAS LYNCH, PROFESSOR OF UROLOGY, TRINITY COLLEGE DUBLIN, UNIVERSITY OF DUBLIN
THE T J D LANE LECTURE 2016 – CITATION

BY

MR RONNIE GRAINGER, UROLOGIST

It is appropriate to mention something about Tom Lane after whom this lecture is named.

Tom Lane was appointed as Surgeon to the Meath Hospital in 1922. In those days he was also Radiologist and Pathologist. Quickly he became interested in urological surgery and pathology was soon dropped.

In 1943 the seeds of a specialised Genitourinary Unit were sown and it was clear from his address to the Hospital that Lane saw the Unit as being dependent on team work.

He had enormous regard for his nursing colleagues and said “A year’s arduous work enables a Senior Sister to have her annual holiday and very little else”. There was practically speaking no pension scheme and yet as we all know, Nurses are the back bone of the Hospital.

“If we have to choose between new buildings on the one hand and proper staffing on the other, I would unhesitatingly vote for proper staffing”. How relevant are those words even today.

In 1944 Lane stopped working as a Radiologist. His reputation, particularly in prostatic surgery was growing, though it was interesting to note that the mortality rate for prostatectomy at that time was as high as 20%, even in the most experienced hands.

In 1946 the Board of the Meath Hospital were in favour of establishing a separate building to house a Genitourinary Surgery Unit and so planning began. This involved travel and inspection of other Units by Tom Lane and his design was particularly influenced by what he saw at the Mayo Clinic.
On 17th November 1955 the Meath GU Unit was officially opened. This was a 4 story block building, separate from the rest of the Hospital. It had 80 beds, its own Outpatients Department, its own Operating Theatres its own Medical Records system, specialist Anaesthetists but most importantly, specialist Nurses.

It was the second largest Urological Unit in Europe. The Consultants were Tom Lane, Dermot O’Flynn and Victor Lane. Nobel Prize winner Charles Huggins visited their Unit and suggested to the Hospital Committee that the Unit should be named the Lane Unit but this was rejected by T J D Lane himself.

We do however remember this pioneer of Irish Urology in the T J D Lane Lecture and in Lane Ward at Tallaght Hospital. The Lane Lecture is one of four named Public Lectures in the Faculty of Medicine, Trinity College Dublin and is delivered by “a selected Urologist who has contributed greatly to urological practice”.

**FORMER T J D LANE LECTURERS INCLUDE**

Mr Anthony Walsh  
Dr Andrew Van Eschenbach  
Professor John M Fitzpatrick  
Mr Michael Butler  
Mr Patrick Duffy

**A/PROF DAVID WEBB**

A/Prof Webb trained as a Urologist at the Royal Melbourne Hospital obtaining his FRACS Urology in 1982. His post-graduate training included one year as a Senior Registrar in Urology at the Meath Hospital in Dublin (1983-84) and a further two years in London at the Institute of Urology and the London Lithotripter Centre.

He is currently A/Prof of Surgery, University of Melbourne, Urologist Austin Health and Olivia Newton-John Cancer, Wellness and Research Centre,
Consultant Urologist Royal Children’s Hospital Melbourne and Consultant Urologist (Specialist Reserve) Royal Australian Air Force (Squadron Leader).

T.J.D. LANE LECTURE

SLIDE 1  TITLE SLIDE

T J D LANE LECTURE

“DUBLIN TO DUBLIN: A THIRTY YEAR ENDOUROLOGICAL ODYSSEY”

A/PROF DAVID WEBB

ST JAMES’ HOSPITAL, DUBLIN
9TH SEPTEMBER 2016
SLIDE 2  AUSTIN-ONJ HOSPITAL MELBOURNE

T J D LANE LECTURE

Austin Health, Olivia Newton-John Cancer and Wellness Centre and the Mercy Hospital for Women

SLIDE 3  DAVID AND ROBINA WEBB ARRIVING IN DUBLIN 1983
When Robina and I first glimpsed Ireland from the Holyhead Dun Laoghaire ferry in June 1983, the term “Endourology” was unknown.

On arrival an elderly Dubliner “warned” us “that once you have lived in Ireland, you will never be quite the same”.

I am delighted to report that he was correct.

My position as Senior Urology Registrar at the Meath Hospital came by default. Traditionally, a newly qualified Australasian Urologist would take a Fellowship post in the United States or the United Kingdom. I rather over confidently assumed that I was a “lay down misere” for the Australasian Fellowship at the Institute of Urology in London.

Not even short listed, I was bereft, depressed and unemployed.
A serendipitous phone call from Mr Dermot O’Flynn saved my bacon. An American Fellow coming to the Meath had withdrawn at late notice.

SLIDE 6  WORLD MAP RECORDING INTERNATIONAL UROLOGISTS TRAINED AT THE MEATH UROLOGY DEPARTMENT

AUSTRALIANS
- Agnelo D’Sousa
- Stuart Sillar
- Robert Wines
- David Webb
- Douglas Travis
Was there an Australian who could come? The Meath had a long tradition of training International Registrars from the USA, Middle East, India, South East Asia, Europe and Australia.

Dermot had visited Melbourne the year before and enthralled us with a lilting exposition on pyeloplasty. The opportunity to spend a year in the Republic of Ireland was more than enough incentive to accept the post.

SLIDE 7  VIEWS OF THE ROYAL MELBOURNE AND AUSTIN HOSPITALS

At the time, pre internet, I knew as much about the Meath Hospital as a Dubliner would the Royal Melbourne or Austin Hospitals, nothing!
Ireland was experiencing significant economic depression and widespread unemployment in 1983. So much so, my wife Robina, languished on a six month waiting list to become a part-time volunteer at the Simon Community Men’s Shelter.

Top of the hit parade was “yer man” Christy Moore’s “Lisdoonvarna”.
The common topics of conversation were Milk Lakes, Butter Mountains, and the tragic day that the price of Guinness hit a punt a pint, an event that almost stopped the nation.

The economic bleakness never dampened the friendliness, happiness and generosity of our new Irish friends who welcomed, entertained and introduced us to their concept of “Great Craic”.
Ireland was very horse orientated. One couldn’t help but be involved, whether watching the Royal Dublin Society Horse Show, the Polo at Phoenix Park, the Irish Derby at the Curragh, or riding Polo Ponies ourselves in the hills behind Tallaght.
We Beagled, a form of “non-blood sport”, where the participants run behind the beagles, whose aim was to chase a hare by scent, but never catch it, and to lose the scent, just outside a pub!

The Meath Beaglers proudly boasted the deepest bogs, the densest thickets and an enormous pride in never having caught a hare in 30 Years!
A night of luxury in Dublin was a show at the Olympia and a pint or two in a snug at the Joycean pub, Davey Byrne’s.
Then on to the legendary Leo Burdock’s Chipper up by Christ Church, where the fat boiled over an open fire, for cod and chips.

**SLIDE 14  GEORGIAN DOORS AND HOUSES – DUBLIN**

On weekends we strolled through the magnificent Georgian Squares savouring the beautiful gardens and doors.
We wandered through the Coombe and the Liberties, the site of the original Meath Hospital which “began in humble and squalid accommodation”. We were warned the area was dangerous, but that was never our experience.
Heading north we crossed the Halfpenny Bridge, “the metal bridge” of Ulysses, over the Liffey to Smithfield Market to watch the traveller’s and their horses.

SLIDE 17  ANCESTRAL SCENES IN DONEGAL AND CLARE
As Antipodeans do, we spent the weekends exploring the West Coast looking for ancestral roots. Robina, a Gallagher, found hers in Donegal and I discovered mine in Mymore, County Clare, near Lisdoonvarna.

My first and only major problem in Dublin was the absence of a home telephone. The Hospital pager did not leave a message. Fortunately, our Dublin home, the top floor of 58 Harcourt Street, was conveniently located next door to the Harcourt Street Hotel, a very “down market version” of the current incarnation! When preparing this lecture I discovered our old visitor’s book. In it was the signature of a young researcher, Dr Peter Ryan now the incoming President of the Irish Society of Urology, and my fellow Registrar, Ronnie Grainger.
Harcourt Street had a vibrant local street market.

The Hospital pager was an alert device. When it sounded, I could only reply by using the Hotel pay phone, even if it meant waking the publican. I soon discovered that obtaining a new phone in 1983 Dublin was a near impossible exercise.

I had no luck with Telecom Eireann. The urgent waiting list for a home telephone was nine years! A fellow senior anaesthetic registrar, who protested to Telecom, was told “If the phone was that important, why didn’t you buy a house that already had one!” Not deterred and knowing that Dermot O’Flynn played golf with the President every Wednesday and Victor Lane was chums with the Minister for Telecommunications, I assumed that with these connections, I was sure to get a phone. Both avenues failed.
I had treated a Christian brother from the North Dublin O’Connell School when he was in Melbourne. Brother Ernest told me that “if I ever had any problems in Dublin, the Brothers could fix it”. Without any expectations, I mentioned my telephone debacle to Brother Ernest.

“Not a problem, I’ll contact a past pupil” was the response. Forty-eight hours later I received a frantic voice page. The Meath switchboard operator had a technician from Telecom Eireann on the other line, urgently wishing to find out “when it would be convenient for me to allow him to install my telephone!”

Now we knew who really pulled the strings in Dublin!
The Meath was an absolute culture shock to an Antipodean. There I was in an Institution whose first Hospital was built in the Earl of Meath’s Liberty 35 years prior to colonial settlement in Australia, and the current “new Meath”, 32 years before the European settlement Melbourne.

The hospital was sited on the Dean’s Vineyard, where the famous Trinity Cleric, Jonathan Swift, had an orchard and a paddock for his horse. Next to, but separate from the main hospital was an outhouse building, which during my period was the Cardiology Unit.

Rumour had it, that this building was connected to St Patrick’s Cathedral by a secret underground tunnel which used by Swift for secret trysts with his paramour.

I always had a quiet chuckle passing the Cardiology Unit— a place that was once the home for the passions of the heart, was now the centre for diseases of that organ!
I had no idea I was coming to Ireland’s oldest voluntary University teaching hospital, nor of its Trinity College affiliation.

In front of me as I climbed the stairs, were the legendary names of Graves, Stokes, Cheyne and others – I was in the home of the Halcyon days of Georgian medicine and amongst the very wards where Graves began bedside medical student teaching, during the period often referred to as the “Dublin School of Medicine”.

On the flank of this stone building was the four story 80 bed Urology Unit, the second largest Department of Urology in Europe, the birth place of “Modern Irish Urology” in 1955, and the site of the inaugural Punch Club Meeting in 1949.

There it stood, a contemporary urological department, side by side the ancient hospital of Stokes and Graves.
The wall of the hospital along Long Lane incorporates part of the wall build by Dean Swift. On the surgical roll was a name unfamiliar to me, TJD Lane, who the board records served the Meath Hospital for 45 years 1922 to 1967. I passed his bust daily at the entry of The Urology Department.
In 1983 renal calculi were Urology’s “hot topic”, not prostate cancer.

In Melbourne, we were hearing reports of extracorporeal shock wave lithotripsy shattering kidney stones, while the patient lay in a cradle suspended in an enormous water bath, from Christian Chaussy in Munich.
Mr John Wickham, Director of the Academic Unit of the London Institute of Urology, and the English pioneer of PCNL, visited the Royal Melbourne Hospital. Soon after I had the privilege of being the assistant at Australia’s first PCNL in 1982.

**SLIDE 26 FIRST TEXT BOOK ON PCNL (WICKHAM 1983)**
This introduction gave me the opportunity to work with John in London for the three months prior to commencing at The Meath. I attended the 1st World Congress on Percutaneous Nephrolithotomy at the Institute of Urology in London, where Wickham’s book, the first text on PCNL, was launched.

SLIDE 27  DERMOT O’FLYNN, HEAD OF UROLOGY DEPARTMENT, MEATH HOSPITAL

Then on to Dublin, where my Chief was the man schooled by the Christian Brothers in Cork, Dermot O’Flynn. I was immersed in the extraordinary workload of The Meath, the “TURP capital” of Ireland and the UK. In one day I performed 13 transurethral resections. This would take our current trainees 3 to 4 weeks in Melbourne.

Stuart Sillar, the first Australian Senior Registrar to work at The Meath in 1968, had been frustrated by his lack of TUR Prostate experience at St Peters in London. He was advised to apply to The Meath. Stuart was taught TURP by Dermot and Victor Lane – He recalls that these were “some of the most instructive and enjoyable years of my life”. There were only two other Urologists in Dublin, Frank Duff and Peter McClean.
In 1983, I was just too busy and absorbed by the clinical workload to appreciate either the history of the Meath Urology Unit or Tom Lane’s contribution to Irish urology.

The consultants were very hands on. All excellent surgeons and teachers. Dermot O’Flynn, had trained in Edinburgh and followed Tom Lanes’ footsteps to the Mayo Clinic. He was the ideal leader. Outwardly Dermot appeared stern and serious. According to Bob Wines, who followed Stuart, Dermot was the “Academic side of the Unit, and a meticulous surgeon”. He would often quote “Old Mr Lane”. Dermot practiced and expected extremely high standards in surgical technique, personal behaviour, record keeping, correspondence and research. Michael Butler wrote, he was a man with an “aura of composure even under pressure”. I experienced this characteristic on many occasions. He was a pragmatic and versatile surgeon, and a great teacher, especially TUR Prostate. Dermot often affectionately referred to “Mr Lane’s Tank” an overhead device that supplied continuous irrigant for endoscopic surgery.

SLIDE 28 TWO OF D O’F’S PUBLICATIONS, PROSTATECTOMY AND SPINAL INJURY

3083 PROSTATECTOMIES JIMA 1967
Influenced by his Mayo visit, Dermot continued the meticulous database and punch card system brought back by Lane and was able to draw on this huge experience to produce meaningful and profound series.

Dermot’s publication of 3083 prostatectomies in 1967 was a milestone paper, widely quoted in the UK.

A further legacy was his meticulous management of paraplegic patient’s spinal injuries and the neurogenic bladder.

Under his direction, I reviewed the records of 406 patients treated the “National Medical Rehabilitation Centre” and otherwise known as “The Cedars and The Meath.

Dermot insisted that all patients be assessed by a Urologist on admission, and continuously throughout their stay, with the ultimate aim of protecting the upper urinary tract from a high pressure bladder. His results were outstanding. As a result, patients with neurogenic bladder from any cause now survived their urological complications.

Dermot graciously allowed me to be first author on his work.

The paper was read at BAUS, published in the BJU, and at the request of Professor Rudolf Hohenfelner, Europe’s most eminent Urologist at the time, translated into German and re-published in Aktuellae Urologie.

Dermot’s other great contribution was the establishment of the Irish Stone Foundation, which in due course funded my research.

Dermot served The Meath from 1952 to 1987, continuing and embellishing Lane’s foundations.
Behind this seemingly serious exterior was a soft gentleman which was brought home to me when Dermot opened the Meath Hospital Art Exhibition. To encourage potential buyers he made the analogy that “A painting is like a child, there is always room for another one in the home!”

Tragically, during my term, Dermot’s wife, Monica, developed a relapse of an illness which she had battled for years and passed away. Although internally devastated, Dermot pushed on. I had the privilege to be of assistance in a very minor way by shouldering some of his public work, which helped forge a strong bond between us.
Christmas Day was Dermot’s day! The Consultants, their families and the resident staff all attended and sang carols on the ward.

My future family and friends joined in. The Meath had a long association with literary greats, Dean Swift, Mangan, Oliver St John Gogarty and Brendan Behan, who spent his last days in the Meath. I had the privilege of looking after Brendan’s cousin, Paddy Behan, an actor. Paddy rose to his feet and recited Hamlet’s Soliloquy, “To be or not to be” for us “visitors” on Christmas day, 1983.
Dermot revelled in carving the turkey. The meals were delivered to the patients by the Consultants.

Victor Lane, Tom’s son, began with Dermot in 1952 and served till 1990. Victor Lane has been described by Sillar and Wines as a “father figure”. I
would agree. He was an extremely kind, modest, shy, charming, old fashioned gentleman. Inscrutably honest, Victor possessed a quick wit and wicked sense of humour. He was highly principled and humble. Victor was the perfect “foil” for Dermot.

Victor was also God fearing. Bob Wines recalls a wonderful story when Victor inadvertently “blasphemed” after making a hole in the inferior vena cava. He spent the next 24 hours roaming the Meath for anyone who may have been within hearing distance to apologise for his profanity.

SLIDE 33 MEMORABILIA FROM 200TH RCSI CHARTER DAY, 1984

He was a great man for confidential advice and the consummate medical politician. Victor became President of the RCSI during my tenure. I was his guest at the Bicentenary Charter Day Banquet on the eleventh of February 1984, a unique privilege.

Victor had an uncanny knack for reassuring country patients who were often quite intimidated, their prostate problems being the reason for their first visit to the Capital. When asking their surname, he invariably deduced their home town, disarming, relaxing and delighting them.
Victor loved bladder stones. He was a most accomplished and skilful manipulator of the Thomson blind lithotrite.

He is also the only surgeon I have seen do a Freyer prostatectomy in less than 5 minutes! The patient was fully anticoagulated. Victor said the quickest operation was the best! All went smoothly.

Victor and Dermot had a great synergy.

**SLIDE 34 JOHN FITZPATRICK AND DAVID ANGUS**

The most junior Consultant was John Fitzpatrick, who took up his post in 1981. John asked to view my first TURP, monitors were non-existent.

I was resentful and a bit miffed. John gave his “nervous cough”, smiled and said, “My dear chap I was just checking that you weren’t importing any English Channels”!

John was very well disposed toward Australians from his days at the Institute of Urology and especially David Angus, who worked at St Vincent’s with Dan Kelly.
Michael Butler had been at The Meath since 1974. He had quite a reputation for his skill with the Rack and Pinion two handed Stern McCarty resectoscope, and his golf clubs.

I was concerned that my inability to swing a club may compromise our relationship. Not at all as it transpired. Michael said it had been years since they had a senior registrar who could stay in the hospital to cover Wednesday afternoons!
Michael had quite a reputation as a Surgeon. It was common knowledge that Terence Millin, the inventor of retropubic prostatectomy and the Boomerang needle, had written to Michael when he was a senior registrar, praising him for his skill at the Millin prostatectomy.
Notwithstanding, I was not privy to an exposition of this skill, as the incidence of open prostatectomies at the Meath was only 3 percent of all prostatectomies, compared to TURP.

At the end of my first TURP on Michael’s list, the charge nurse handed me a 2-way catheter. I suggested a mistake may have been made and requested a 3-way Foley. “Mr Butler only ever uses a 2-way” was the reply. After three 2-ways and four bladder washouts, I was allowed to put up a continuous irrigation.

Five minutes into my second TURP, Michael appeared in the operating room. “Is that your 3-way catheter out in the recovery room?” My confirmation was followed by an outburst that I can’t repeat publically, suffice it to say my manhood was questioned and there was an intimation that I may have a leaning towards unnatural acts!

Thirty years on I now realise that Michael Butler was and is the best resectionist I have seen during my career.
He said the Stern McCarthy “Rack and Pinion” two handed resectoscope gave him better feel, torque and traction, allowing him to precisely follow the curvature and direction of his resection.

I tried the two handed instrument. He was correct.

Michael’s external movements were so fluid one could picture his resection internally, without needing a monitor.

John Fitzpatrick, a product of St Vincent’s with a legendary academic record was bursting at the seams. Projects and ideas were flowing. He was already on the way to becoming, in Professor Christopher Woodhouse’s opinion, “The world’s foremost Urologist”, and “developing Irish Urology to International Best Practice”
John suggested I might like to do a project. He recommended we look at the renal effects of percutaneous nephrolithotomy. I was less than enthusiastic, given that, PCNL had already become clinically accepted over the preceding two years. My response was met by another cough and a withering glare that made Michael Butler’s reaction to my 3-way catheter shame appear tepid.

He gave me a copy of his landmark paper on the structural and functional effects of open nephrolithotomy. I “awoke a wiser man the morrow morn.” Our project was underway.

Dermot’s Irish Stone Foundation provided funding. The only missing piece of the jigsaw was an animal model.

SLIDE 39  MASTER AND HOUNDS AND “THE HUNTING PRIEST” Nth TIPPERARY FOX HUNT

Serendipitously, the Director of the Dublin Zoo, who also ran the Department of Experimental Zoology (and surgery) at Trinity College rang John. The Master of a major fox hunt had contacted him. Apparently a hound had “rioted” and killed a sheep. Being “pack animals”, the Master was obliged to put down the
entire team of hounds. He was looking for a constructive use for his condemned dogs.

We were familiar with hounds, having followed some hunts. The best was the “North Tipps”, who boasted the only “hunting priest” in Ireland. Over a shot of “foxes blood and stirrup cup” the Master of the Hunt explained that “Father was a unique asset.”

The farmers were never happy about a Hunt crossing their paddocks, so the “North Tipps” deputised Father to visit and ask “if they wouldn’t mind if the Hunt came through?” Of course the answer was always “not at all Father, not at all”.

SLIDE 40 TCD AND LABORATORY OF EXPERIMENTAL SURGERY (DEPT OF ZOOLOGY)

The Wolf Company loaned us PCNL instruments. With interventional radiologist Gerald Hurley, the first percutaneous nephrolithotomy in Ireland was performed at The Meath on 25th August 1983. By twelve months we had 52 cases. Canine research began synchronously at Trinity College.
Our project was two staged. The first, to investigate nephrostomy access. Once demonstrating that to be safe, evaluate nephrolithotripsy by ultrasonic vibrations and electrohydraulic shock waves.

SLIDE 41  CANINE EXPERIMENTS PCNL

At open surgery a 6-French fascial dilator was introduced from the outer border of the kidney into the collecting system and a guidewire threaded down the ureter. A nephrostomy track was serially dilated with Amplatz dilators to 22-French, equivalent to a 35-French in a human kidney. The track was irrigated with glycine for 30 minutes.
There was no leakage on removal of the dilator, and only a haematoma along the track. Arterial and venous casts were made with latex Microfil.
The Microfil contained contrast allowing angiograms and venograms. Smaller dilators “drilled” the parenchyma, large dilators split and separated in the same manner as an open nephrotomy.

**SLIDE 44  CANINE EXPERIMENTS PCNL**

**ANATOMICAL BASIS OF NEPHROSTOMY-EXPERIMENTAL**

Intravenous pyelograms at 48 hours showed only mild parenchymal change confined to the track. Methacrylate corrosion casts confirmed that there was no segmental vessel damage.
In one kidney a segmental artery was inadvertently punctured by a sharp needle. An immediate haemorrhage and subsequent segmental infarct resulted. By coincidence, we had a similar complication in a clinical case.
At six weeks the only remaining evidence of the nephrostomy was a surface dimple and a fine linear scar contracting centrally in the direction of the puncture. There was no functional change detected by bilateral creatinine clearance.

These experiments defined a safe renal puncture as one that entered the tip of a calyx through the peripheral parenchyma and fine vasculature only, proceeding towards the renal pelvis, safely separated from the renal sinus and segmental vessels by the collecting system.
In contrast, an unsafe puncture entered the collecting system medially through the renal sinus, endangering segmental vessels, tearing the unsupported calyces and pelvis.

**SLIDE 49  EXPERIMENTAL NEPHROLITHOTRIPSY**

In a further 16 dogs human calculi were shaped and implanted into the renal pelvis, through the nephrostomy track, then fragmented under vision by ultrasonic or electrohydraulic lithotripsy.

The stone fragments were removed at the time by endoscopic graspers or ground down to fine particles.

Immediate examination and contact dental films showed tiny stone fragments in the collecting system.

**SLIDE 50  EXPERIMENTAL NEPHROLITHOTRIPSY AND IVP**

No stones were embedded in the parenchyma nor did they provide a nidus for further stone growth. All calculus fragments had cleared by 48 hours. Short and long term functional estimations were identical to nephrostomy alone, normal.
In late 1982, the rigid ureteroscope was introduced into clinical urology.

We developed a model to assess ureterolithotripsy when a fragment from a PCNL study was displaced into the upper ureter. Small 5-French electrohydraulic probes were found to be safe when placed directly on the stone, but could perforate the ureter when in direct contact with the ureteric wall. Larger and more powerful probes universally caused ureteric perforation, bruising, and dissection of the wall by irrigant.

Ultrasonic ureterolithotripsy on the other hand was safe, even when the probe was in contact with the ureteric wall, as long as there was continuous irrigation to prevent overheating of the probe.
Our canine model became the basis for other studies, including the sealing of radial nephromies using the Sapphire Photo Coagulator, by Ronnie Grainger.

Our PCNL study was first presented to the Irish Society of Urology Annual Scientific meeting, 1984
Barry O’Donnell and Prem Puri also presented their new, and then, controversial, “Sting” operation for vesicoureteric reflux at the same meeting. Barry and Prem had designed an offset cystoscope with a straight channel with the Storz Company.

No-one could have predicted that four years later, Barry and Prem’s operative STING-cystoscope, would become the nephroscope used to perform the world’s first paediatric percutaneous nephrolithotomy, and in doing so, first mini PCNL, at the Royal Children’s Hospital in Melbourne.

In 1984 Ireland boasted 12 - 16 Urologists, no-one was quite sure.

The Irish Consultants were collegiate, co-operative, multi-talented and enthusiastic about registrar training. Ted McDermott, Michael Hehir, Ronnie Grainger and myself, with a number of foreign graduates and junior registrars had regular tutorials across Dublin.
As a result I had the privilege of meeting and experiencing the generous teaching of Seamus Smith, the enthusiasm of Barry O’Donnell and the charm of Frank Duff, who wrote the Constitution of The Irish Society of Urology with Dermot. The legendary cancer Surgeon Dan Kelly is best known in Australia by virtue of a difficult and enthusiastic Millins’ enucleation of a particularly large prostate, in which the adenoma, a very loud expletive and a mallet finger simultaneously emerged from the wound!

Frank and Dan are acknowledged as the dual inspiration for the urological careers of two of Ireland’s leading international academic urologists, Ralph De Vere White and John Michael Fitzpatrick. Last but not least was the inspirational thespian and polyglot, affectionately known as “The Nark”, the pioneering transplant surgeon Tony Walsh, a Trinity man, Lane lecturer, and an international legend following the delivery of his Presidential address to the SIU in eight languages!

Dublin urology, was quality not quantity.

In fact, three of my Consultants at The Meath were awarded the highest honour in Irish surgery, election to the Presidency of the RCSI – Victor Lane (1984-86), Dermot O’Flynn, the first Ed Eundem Fellow and first Cork man to be elected President (1992-94) and Michael Butler (2002-04).

The international reputation of The Meath TURP was confirmed when Professor John Blandy asked me “why, if I was working at The Meath Hospital, had I come to his workshop on transurethral resection of the prostate?” I was so taken aback, that I blurted out the truth. The Meath wouldn’t give me annual leave, so I had to enrol in his course to come to London, where my actual intention was to finalise the arrangements for Robina and my wedding! Blandy replied, “In that case I understand”.

My year in Dublin finished mid-1984. I returned to the UK to work with John Wickham in London.

I was urologist to the London Stone Centre and Senior Lecturer at the Institute of Urology. John was already moving on from PCNL.

**SLIDE 55  HM3 LITHOTRIPTER CRADLE, WATER BATH AND “SPARK PLUG” ELECTRODE**
The HM3 lithotripter generated shock waves by spark gap energy. The plant, patient crane and water bath were bulky. John was desperate to introduce ESWL to London. To do this he needed a general factotum. That of course was me!

I travelled to Mainz in West Germany to present our PCNL research at the 2nd World Congress on PCNL. I was accompanied by John Fitzpatrick, David Tolley, the Scottish pioneer of PCNL and the remarkable Ron Miller, who co-authored Wickham’s first PCNL book and pioneered English PCNL with Wickham. I later returned to Peter Alken’s department in Mannheim, to train in shock wave lithotripsy. At that time there were 18 ESWL Units worldwide, all in West Germany. The HM3 lithotripter was installed in London by the St Martin’s Group in Wellbeck Street and Robina and I took up residence next door.
The first ESWL was performed in the UK on 20th November 1984 on a National Health Service patient. Within a short time we had published the first 50 ESWL treatments outside Germany.
American Urologists were hamstrung with respect to ESWL publications because the FDA centres were restricted until the trial data was mature and analysed in late 1985.

There was only one UK hospital with a lithotripter which became the London Stone Centre. We had access to National Health Service and private patients.

John Wickham and Michael Kellett, the English pioneers of PCNL were the leaders of the lithotripter team. Multiple papers defining the indications and complications of PCNL, ureteroscopy, shock wave lithotripsy, the application of percutaneous surgery to hydronephrosis by endopyelotomy or endoscopic pyeloplasty, and the first and to this day, the only paper entirely devoted to the “Stein Strasse”.

**SLIDE 59  UPDATED TEXTS ON RENAL VASCULATURE AND PCNL – ESWL**

Fred Graves’ classic text on renal arterial anatomy was revised by John Fitzpatrick and myself, adding a new chapter on the effects of PCNL.

John Wickham’s PCNL book also required updating with the addition and combination of shock wave lithotripsy and ureteroscopy. That task fell to myself and fellow Urologist Steven Payne in 1986.
The London Stone Centre became a magnet for Urologists from around the world, resulting in multiple invitations for presentations in Europe, the Middle East and South East Asia.

SLIDE 61 PROGRAM OF 3rd WORLD CONGRESS ON ENDOUROLOGY
In 1985 I attended the New York 3rd World Congress on Endourology, where I believe the term Endourology was publically aired for the first time. That Meeting included PCNL, ureteroscopy and shock wave lithotripsy.

Returning to Melbourne at the beginning of 1986 it dawned on me for the first time how much Melbourne had been influenced by it’s Irish Settlers. I had unknowingly grown up amidst their influence.

Street names took on a whole new meaning. I had gone to School in Sackville Street. One block parallel was Harcourt Street. Turning off Harcourt Street along Kildare Street, one comes to Rathmines Road. Veering left you will stand in front of our old family home – “Rathgar,” built by William Burke, a Dubliner, in 1886! Should you now turn right and knock on the door of 83 Rathmines Road, it will be opened by Associate Professor Declan Murphy, who may well be having a pint with Niall Corcoran, members of the Melbourne Urological Diaspora.

Those who have trained in Melbourne and since returned include the irrepressible David Bouchier – Hayes who penned his magnificent biography of Millin while working in Melbourne, and David Connelly, to name a few.
I was appointed to my alma mater, the Royal Melbourne Hospital. By virtue of being one of the first Australians to train in a large PCNL Unit, I was also appointed to the Austin, Royal Children’s and Box Hill Hospitals. In my first year of practice, sadly a temporary scenario, I performed more PCNLs than cystoscopies!

**SLIDE 63  WEBB SINGLE STAGE COOK DILATORS**

Fortuitously, The Cook Urological Company had a small factory in Melbourne enabling us to develop and produce purpose designed Endourology instruments. Over the next few years we made a total of 19, the most significant being a renal puncture needle and the single stage kidney dilator.

My stone work at the Royal Melbourne attracted the interest of our neighbour, the Royal Children’s Hospital, who had a large population of spina bifida patients diverted with ileal conduits in the 1950s and 60s, many of whom had developed staghorn calculi.
I was able to clear these but unable to win over the paediatric surgeons to adapt PCNL to toddlers. They argued that infants have a lower blood volume and tolerated blood loss, fluid overload and hypothermia poorly, certainly less well than adults. Also “their kidneys were smaller than adult kidneys and as such, we would damage them”.
With my paediatric colleague Hock Lim Tan and Registrar, Douglas Travis, the last Australian Registrar to work at The Meath, we compared single stage dilatation, balloon dilatation, car aerial dilatation and serial Amplantz dilatators, using a similar canine model to my TCD studies.

The single stage dilator was faster and less bloody, and manufactured locally by Cook in 16-French size.
Our publications of paediatric PCNL and endopyelotomy in 1990 and 1993 predate the first descriptions of “Mini Perc” by five years, and the recently developed “mini PCNL” instruments use similar metal single stage dilators.

Back in London and Dublin, Wickham and John Fitzpatrick were frustrated that other surgical specialties were not embracing minimally invasive surgery.

ESWL was first reported in 1980, PCNL 1981, ureteroscopy 1982, but the operation that was the bellwether of minimally invasive general surgery, laparoscopic cholecystectomy, was not published in the English language until the late 1980s, only commencing in the USA in 1988 and Ireland in 1990 by Professor Bouchier-Hayes.
Wickham was determined to encourage all surgeons to embrace MIS. He called together a large section of the trade, surgical, medical and radiological specialists. I was privileged to be a foundation member of the Society of Minimally Invasive Surgery in 1989 in London.

I took that opportunity to make a brief return visit to The Meath. Entering the switchboard, I was unrecognised. Crestfallen, I was about to leave when an operator looked up and said, “Hey I remember you now, aren’t you that guy who got the telephone?”

Nice to be remembered for something!
In Melbourne in collaboration with the Storz Company we devised back cutting knives for endoscopic pyeloplasty and corresponding purpose built nephrostents with Cook.
The general Endourology explosion moved the focus of attention away from PCNL. However the recent renewed clinical interest and new instrumentation such as mini PCNL has seen a resurgence and the need for a new text on PCNL – 30 years on!

**SLIDE 70 VARIOUS “MINI” PCNL WORKSHOPS**

PCNL suffered to a degree following the introduction of flexible ureteroscopy. Mini PCNL is undergoing a resurgence particularly in China, India and Germany. We still conduct regular PCNL workshops throughout Australia, New Zealand, the Pacific, Hanoi, Ho Chi Minh City, Java, Myanmar and now Dublin!

It would be impossible to catalogue the exponential development of Endourology in one lecture.

So, I would like to “move sideways” now and take this opportunity to reflect on the meaning of Endourology, and its association with Ireland.
Over the last few months I have been asking my colleagues to define Endourology.

Would any of the audience like to propose a definition?

We all think we know what it means – however, I am yet to receive an acceptable response!

One could be literal.

“Endo” and “urology” combined suggest urology done endoscopically.

But this does not fit with current practice.

If we do accept the literal definition, then Nitze, the pioneer of cystoscopy in the 1870’s, would have to be considered the Founder of Endourology.
My first exposure to the word “Endourology” came in 1985 at the New York 3rd World Congress on Endourology.

I was delighted to receive a certificate, announcing that I had been elected a Foundation Member of the Endourological Society, over the names of Arthur Smith and Gopal Badlani from New York, Joe Segura, The Mayo, and Ralph Clayman St Louis, the great pioneering protagonists of PCNL in the USA.
The meeting was billed as the “3rd Conference of Endourology”. I was surprised. Firstly I was unaware that there has been a 1st and 2nd Conference on Endourology and secondly, I discovered that indeed not only had there been but unbeknown to me at the time, I had attended both!

John Wickham’s London Meeting in 1983 and Peter Alken’s Mainz Meeting in 1984 were both called “Conferences on Percutaneous Surgery”.

Interestingly, Alken’s and Smith’s Conferences included Ureteroscopy and extracorporeal shockwave lithotripsy, the latter obviously not an endoscopic procedure.

The London and Mainz Meetings appear to have retrospectively changed their titles.

Indeed if you go to the Endourological Society website, these Conferences are currently listed as the first two “World Congresses on Endourology”, with John Wickham and Peter Alken respectively the Presidents.
I believe Smith et al had a most rational logic when coining the term Endourology. Endourology was used by them to define the sea change that PCNL, ureteroscopy and ESWL had made to upper urinary tract stone surgery – by replacing conventional open surgery with a minimally invasive alternative.

John Wickham, who coined the term Minimally Invasive Urology, groups Smith et al with Europeans Alken and Eisenberger and others as “like minded innovative minimally invasive Urological Surgeons who helped develop the Endourological Society”

We must remember this urological revolution preceded the laparoscopic cholecystectomy, by eight years. MIS of the kidney and ureter were a profound leap forward.

The Endourological Society has a nephroscope in a kidney as its logo, representing the origins of minimally invasive Renal Surgery. Smith’s current “text book of Endourology” extends to nearly 2000 pages and includes over a 115 procedures related to the kidney, ureter, bladder and prostate involving laparoscopy, laser, robotics and countless other energy sources and procedures, many of which are minimally or non-endoscopic.

Endourology has expanded exponentially over 30 years.

I believe Smith’s philosophy of Endourology is well summarised by the following quote – “the overarching principle is to avoid open operations with their high risk of mortality in favour of much simpler and less invasive procedures”.

This was the modus operandi of an Irishman, Edward Canny Ryall, a Trinity man, who founded his own Urological Hospital, All Saints, in London in 1911. Canny Ryall pioneered transurethral prostatectomy in the UK.

On reflection it would seem that one can argue strongly that the Transurethral Prostatectomy was the foundation operation which came to define modern
Urology by replacing the more morbid open prostatectomy in the same way PCNL and URS replaced open pyelolithotomy and ureterolithotomy.

The 1930’s have been labelled the “heyday of American Urology”, which coincides with the exponential expansion of transurethral prostatectomy in the great American Units such as the Mayo, New York and Ann Arbour, by Stern, McCarthy and Nesbit in particular.

Interestingly, the major Urological Units in Melbourne also became recognised as distinct Urology Units rather than “general surgeons with an interest” when a number of Melbourne Urologists visited the USA and returned with TURP expertise.

**SLIDE 74  VARIOUS “PROSTATE LOGOS”**

With this new focus on the prostate, at least half a dozen Urological Societies have adopted the endoscopic view of the prostate as their logo, moving away from our original defining disease, stone – the bladder malady that led to the foundation of St Peters in London.

Terence Millin became personal assistant to Edward Canny Ryall in London in 1928.
Canny Ryall had already given up open surgery. He was purely an endoscopist.

During the 2nd World War years, diathermies were “conscripted” for the manufacture of antiradar devices.

Millin performed over 2000 prostatectomies between 1930 and 1940, 80% endoscopically.

Frustrated by the large calibre early TUR instruments and without endoscopic diathermy, Millin developed his fiendishly simple, safe and reproducible open retro-pubic prostatectomy – so easy, a General Surgeon could do it!

**SLIDE 75  HISTORY OF BAUS WITH REFS TO MILLIN AND TJD LANE, 1985**

As a result, English Surgeons were slow to adapt to Transurethral Prostatectomy.

John Blandy writes that the TURP was being referred to as “a silly operation” in 1960’s. At the London Hospital, Urologists were obliged to take General Surgical On-Call until the late 1960’s.
The senior men insisted on remaining Generalists, and on reflection, Millin’s brilliant prostatectomy aided their cause.

The history of BAUS records that “a Senior Registrar in 1960 had to take himself to the USA to learn the TURP skills”.

The Australian Stuart Sillar however came to Dublin instead of the USA, the first Urologist from the Institute of Urology to do so, a much more convenient site, to learn TURP.

What about Irish Urology?
It has been a surprise to me to discover that three of the four legendary Irish prostatectomists – Freyer, Canny Ryall and Millin, never practiced in Ireland.

**SLIDE 76 “A PORTRAIT OF IRISH MEDICINE” 1984 WITH REF TO TJD LANE**

The exception was Tom Lane of Dublin.
Lane’s contribution has been prominently recognised by BAUS in their history.

Brought up in India, where Freyer became famous, Lane took up fulltime Urology in 1930 at the Meath.

In 1938 Lane journeyed by boat and train to the Mayo Clinic in Rochester, leaving Ireland a confessed disbeliever and sceptic, to see the Mayo Clinic for himself, and learn their skills of transurethral prostatectomy.

He returned a convert. Lane was astonished by what he learned and returned home, determined to fully adopt the entire Mayo philosophy including specialised Nursing and Anaesthetic Staff, as well as transurethral prostatectomy. Lane was also determined to emulate the Mayo mortality of 2%. Within a year he had performed a 120 cases of punch prostatectomy with a mortality of 2.5%.

Dermot O’Flynn was appointed to The Meath in 1952. He also went to the Mayo and returned to perform 500 punch prostatectomies.

However, following a demonstration of “hot electric wire loop resection” at the Meath by a visiting New Yorker, TURP as we know it replaced the Punch, and the rest is history.

It is my conclusion the TURP was the nascent procedure that began the speciality of “Modern Urology”. TURP represented exactly the same concepts and philosophy that Smith et al embraced when they introduced the term Endourology to represent the minimally invasive revolution that replaced open upper urinary tract surgery.

Now back to Ireland. It would appear that legendary Irish Urologists come in pairs.
SLIDE 77  PORTRAITS OF FREYER AND MILLIN

The Open Prostatectomists - Freyer and Millin, both innovative, highly skilled and renowned teachers.

SLIDE 78  PORTRAITS OF RALPH DE VERE WHITE AND JOHN FITZPATRICK
The Academics, Ralph Devere White, who I met in 1983 at Columbia, New York, now Emeritus Distinguished Professor of Urology at University of California, Davis, in Sacramento, and the late Professor John Fitzpatrick.

So the question remains, who were the Endourologists?
Edward Canny Ryall.

Ryall must have known Freyer. Freyer was at his zenith at St Peter’s in 1910, and Ryall opened All Saints in 1911.

Both fierce Irish Nationalists, they declined to sit the FRCS to join St Peter’s staff.

“Pete’s” changed the rules for Freyer, they so desperately wanted him for his lithotomy prowess.

His prostate surgery wasn’t to blossom for another ten years.

“Pete’s” got a bargain, two for one!

Ryall walked away from St Peters, put his hand in his pocket, and opened his own Urological Hospital in London, All Saints.
Canny Ryall was exclusively an endoscopic Urologist. He encouraged Millin to be the same, initially succeeding.

Canny Ryall’s atlas of cystoscopy published in 1925 is a beautiful masterpiece.

Canny Ryall introduced TURP to England.

As such, if we accept the proposal that the TURP was the first major endourological procedure, I believe Edward Canny Ryall should be considered as the father of Endourology in the United Kingdom, alongside John Wickham who pioneered minimally invasive surgery of the upper urinary tract and indeed in retrospect, organised and was President of the 1st World Congress on Endourology in London 1983.

SLIDE 81  CONCLUSIONS  BUST OF TOM LANE

TOM LANE

- FATHER OF MODERN IRISH UROLOGY
- FATHER OF IRISH ENDUROLOGY

That leaves us with T D J Lane, acknowledged at home by Professor Eoin O’Brien et al and internationally in the British Association of Urological Surgeons history, as the Founder of modern Irish Urology.
I put it to you that Tom Lane, the visionary of The Meath, the man who bought Transurethral Prostatectomy to this city and nation, should also be remembered as the Founder of Irish Endourology.

**SLIDE 82  LANE LEGACY**

LANE’S LEGACY

“If you seek his monument, look around you”.

after Sir Christopher Wren’s epitaph

So, what is the legacy of T J D Lane?

I came to Dublin, unaware of Tom Lane. There would be few, if any, in this room who met him. I feel now, to a certain degree, that I know him.

When the Nobel Prize winner Charles Huggins visited the Meath Urology Unit, he was so overawed by what he saw, he wrote to the Hospital Committee and suggested the Urology Department should be named the “Lane Unit”.

Tom wouldn’t have a bar of it!

Lane died in 1967.
Lane had brought international fame to The Meath.

The Meath moved to Tallaght in 1998 – only then was a Urology Ward named after Lane.

But Lane didn’t want a physical monument.

However, He has a very real legacy.

**EPITAPH**

If I may, I would like to paraphrase the beautiful epitaph inscribed on Sir Christopher Wren’s tomb at St Paul’s Cathedral – “If you seek his monument, look around you”.

The same can be said for T J D Lane, because Modern Irish Urology is Lane’s legacy and it is here, amongst us, in this room, this evening.

**SLIDE 83  T.J.D. LANE MEDAL**

![T.J.D. Lane Medal](image)

**THE END.**