

Curriculum Vitae

Mr PF Keane MCh FRCS(Urol)

Consultant Urologist

Summary of Clinical Experience

Qualifications

MB BAO BCh	NUI	1978
FRCSI	RCSI	1982
MCh	NUI	1984
FRCS(Urol)	RCSE	1992

Basic Surgical Training Galway 1979-1982

Registrar in Paediatric Surgery 1982-3
Temple Street Dublin

	<u>1983-6</u>
Research Fellow	Edmonton
Surgical Registrar	St Vincent's Hospital
Surgical Registrar	Arrowe Park Hospital

1990-4 Senior Registrar in Urology Belfast City Hospital

1994

Teaching and Postgraduate Training

1994 to present. Undergraduate teaching: I teach the medical students attached to urology. I have examined in third and Final MB.

1996-1998 I was Postgraduate Tutor and responsible for the induction course for new doctors and also the GP Postgraduate seminars. I was responsible for the continuing education of housemen who were in educational difficulty.

1997-2003 As Programme Director in Urology, I set up the postgraduate teaching for urological trainees. I achieved a 100% pass rate in the exit exam and one trainee won the Medal for best performance nationally. The SAC inspection of 1997 singled out the experience registrars received while with me was of particular value in the Northern Ireland Programme.

1998 I became an examiner for the College of Surgeons in Ireland and examined in both parts of the old Fellowship and am now an examiner for the iMRCS. I teach on the basic surgical skills course and have taught in Jordan and Bahrain.

I have been external examiner in 3 MD's and review papers for the British Journal of Urology International.

2005 I was elected to the Specialist Advisory Committee in Urology and am SAC liaison member for Yorkshire and I visit the region for the RITA/ ARCP process and write the Annual Specialty Report. I am editor of the curriculum document to be submitted to PMETB in July 2010. I have written Procedure Based Assessments for trainees in core and specialised urological procedures.

2007 to present. I became an Intercollegiate Examiner in the FRCS (Urol).and have written MCQ's and structured case scenario's for the exam.

Management and Service Development

1997-2003 I was Lead Clinician in Urology for 6 years. I negotiated the development of 2 new consultant posts at the Belfast City Hospital. I developed the role of the Specialist Nurse in Urology and have appointed 3 to work in and complement the cancer and incontinence service. I led the development of subspecialisation in the Department and there are three urologists doing Oncology, two in stone surgery and one with a major interest in reconstruction. This has allowed excellence in clinical care for patients and provides a tertiary urological service for the Province allowing us to comply with Improving Outcomes Guidance in Urology and achieve National Standards

1997 I chaired and wrote the urological section of the Eastern Board's Review of Cancer Services and have been involved in their development since that time. I presented the urology report for the Eastern Board's Review of Cancer Services in 2004.

2003 I am a Member of the Scientific Reference Group of the Prostate Risk Management Programme and am co-author of the NHS Guidelines on PSA testing. I am co-author of the NHS guidelines on prostate biopsy.

2006-10 I review Article 14 submissions for the SAC in Urology. I have so far assessed more than 20 applications.

2008 I was elected as Clinical Lead for NICAN in Urology. I have established the framework for urology MDT's throughout the Province. I was a member of the Urology Review Team whose report was accepted in 2010. I am a member of the implementation group for team East.

2010 I was elected to the Council of the British Association of Urological Surgeons. I am regional representative for Urology in Northern Ireland and approve all posts in urology in Northern Ireland.

Men Against Cancer

I founded a cancer charity called MAC and have raised in excess of £1million pounds to develop urological services in Northern Ireland

PREVIOUS APPOINTMENTS

Surgical Intern: Mr. C. Galvin.	Regional Hospital Galway 1/7/78 31/12/78	
Medical Intern: Prof. C. McCarthy.	Regional Hospital Galway 1/1/79 30/6/79	
Casualty Officer: Prof. S. O'Beirn.	Regional Hospital Galway 1/7/79-31/12/79	
SHO Orthopaedics: Mr. A. Wilson.	Regional Hospital Galway 1/1/80-30/6/80	
SHO General Surgery: Mr. C. Galvin.	Regional Hospital Galway 1/7/80-30/6/81	
Registrar General Surgery: Mr. C Galvin. Prof. HF Given.	Regional Hospital Galway 1/7/81-31/12/81 1/1/82-30/6/82	
Registrar Paediatric Surgery : Prof. EJ Guiney.	Children's Hospital Temple Street 1/7/82-30/6/83	
Research Fellow: Dr. GW Scott.	Surgical Medical Research Institute University of Alberta, Canada. 1/7/83-31/7/84	
Registrar General Surgery: Mr. A Furber Murphy	Arrowe Park Hospital, Birkenhead 1/9/84-30/6/85	
Registrar: General Surgery: Thoracic Surgery:	St. Vincents Hospital Mr. J Hyland Mr Lynch 1/7/85- 31/12/85	
Registrar: General Surgery: Registrar Urology	St. Michaels Hospital Dunlaoire Mr Duignan 1/1/86-30/6/86 Hammersmith Hospital 1/7/86-30/5/88	
Lecturer in Urology	Institute of Urology	1/6/88-30/5/89
Senior Registrar in Urology	Hammersmith Hospital	1/6/89-31/7/90
Senior Registrar in Urology	Belfast City Hospital	1/8/90-31/3/94

Publications

1.

Re: Monique J. Roobol, Fritz H. Schröder, Pim van Leeuwen, et al. Performance of the prostate cancer antigen 3 (PCA3) gene and prostate-specific antigen in prescreened men: exploring the value of PCA3 for a first-line diagnostic test. Eur Urol 2010;58:475-81.

Connolly D, Hutton R, **Keane PF**.

Eur Urol. 2011 Mar;59(3):

Daily, monthly and seasonal variation in PSA levels and the association with weather parameters.

Connolly D, van Leeuwen PJ, Bailie J, Black A, Murray LJ, **Keane PF**, Gavin A.

Prostate Cancer Prostatic Dis. 2011 Mar;14(1):58-62. Epub 2010 Oct 26.

3.

Splenogonadal fusion: an interesting differential for a testicular lump.

Keane JP, **Keane PF**.

Ir J Med Sci. 2010 Sep;179(3):471-2. Epub 2010 Jun 19.

4.

Repeating an abnormal prostate-specific antigen (PSA) level: how relevant is a decrease in PSA?

Connolly D, Black A, Murray LJ, Nambirajan T, **Keane PF**, Gavin A.

Prostate Cancer Prostatic Dis. 2009;12(1):47-51.

5.

The utility of prostate-specific antigen velocity thresholds in clinical practice: a population-based analysis.

Connolly D, Black A, Murray LJ, Nambirajan T, **Keane PF**, Gavin A.

BJU Int. 2008 Jun;101(12):1507-12.

6.

Baseline prostate-specific antigen level and risk of prostate cancer and prostate-specific mortality: diagnosis is dependent on the intensity of investigation.

Connolly D, Black A, Gavin A, **Keane PF**, Murray LJ.

Cancer Epidemiol Biomarkers Prev. 2008 Feb;17(2):271-8.

7.

Methods of calculating prostate-specific antigen velocity.

Connolly D, Black A, Murray LJ, Napolitano G, Gavin A, **Keane PF**.

Eur Urol. 2007 Oct;52(4):1044-50.

8.
Efficacy and safety peri-prostatic local anaesthetic injection in transrectal biopsy of the prostate: a prospective randomised study.
Nambirajan T, Woolsey S, Mahendra V, Walsh IK, Lynch TH, **Keane PF**.
Surgeon. 2004 Aug;2(4):221-4.
9.
Sequential polyurethane-poly(methylmethacrylate) interpenetrating polymer networks as ureteral biomaterials: mechanical properties and comparative resistance to urinary encrustation.
Jones DS, Bonner MC, Gorman SP, Akay M, **Keane PF**.
J Mater Sci Mater Med. 1997 Nov;8(11):713-7.
10.
Evidence of prostate cancer screening in a UK region.
Gavin A, McCarron P, Middleton RJ, Savage G, Catney D, O'Reilly D, **Keane PF**, Murray LJ.
BJU Int. 2004 Apr;93(6):730-4.
11.
T- and L-type Ca²⁺ currents in freshly dispersed smooth muscle cells from the human proximal urethra.
Hollywood MA, Woolsey S, Walsh IK, **Keane PF**, McHale NG, Thornbury KD.
J Physiol. 2003 Aug 1;550(Pt 3):753-64.
12.
Synergism between radiotherapy and vascular risk factors in the accelerated development of atherosclerosis: a report of three cases.
Pherwani AD, Reid JA, **Keane PF**, Hannon RJ, Soong CV, Lee B.
Ann Vasc Surg. 2002 Sep;16(5):671-5.
13.
Antisense Bcl-2 oligonucleotide uptake in human transitional cell carcinoma.
Duggan BJ, Cotter FE, Kelly JD, Hamilton PW, McCallion K, Harkin D, Gardiner T, Anderson N, **Keane PF**, Johnston SR, Williamson KE.
Eur Urol. 2001 Dec;40(6):685-95.
14.
The BTA stat test: a tumor marker for the detection of upper tract transitional cell carcinoma.
Walsh IK, **Keane PF**, Ishak LM, Flessland KA.
Urology. 2001 Oct;58(4):532-5.

15.
The effect of antisense Bcl-2 oligonucleotides on Bcl-2 protein expression and apoptosis in human bladder transitional cell carcinoma.
Duggan BJ, Maxwell P, Kelly JD, Canning P, Anderson NH, **Keane PF**, Johnston SR, Williamson KE.
J Urol. 2001 Sep;166(3):1098-105.
16.
Molecular targets for the therapeutic manipulation of apoptosis in bladder cancer.
Duggan BJ, Kelly JD, **Keane PF**, Johnston SR; Belfast Uro-oncology Research Group.
J Urol. 2001 Mar;165(3):946-54. Review.
17.
Non-invasive antidromic neurostimulation: a simple effective method for improving bladder storage.
Walsh IK, Thompson T, Loughridge WG, Johnston SR, **Keane PF**, Stone AR.
Neurourol Urodyn. 2001;20(1):73-84.
18.
Bcl-2 expression identifies patients with advanced bladder cancer treated by radiotherapy who benefit from neoadjuvant chemotherapy.
Duggan B, Kelly J, **Keane PF**, Williamson K, Johnston SR.
BJU Int. 2000 Oct;86(6):757.
19.
Bcl-2 proto-oncogene expression in low- and high-grade prostatic intraepithelial neoplasia.
Duggan BJ, Maxwell P, Kelly JD, Williamson KE, **Keane PF**, Johnston SR.
BJU Int. 2000 Aug;86(3):406. No abstract available.
20.
Induction of apoptosis by mitomycin-C in an ex vivo model of bladder cancer.
Kelly JD, Williamson KE, Weir HP, McManus DT, Hamilton PW, **Keane PF**, Johnston SR.
BJU Int. 2000 May;85(7):911-7.
Contractile properties of human renal cell carcinoma recruited arteries and their response to nicotinamide.
Ruddock MW, Burns DM, McKeown SR, Murphy L, Walsh IK, **Keane PF**, Hirst DG.
Radiother Oncol. 2000 Feb;54(2):179-84.

22.
Urodynamic variable cannot be used to classify the severity of detrusor instability.
Walsh IK, Keane PF, Loughridge WG, Johnstone SR.
BJU Int. 1999 Feb;83(3):362-3;
23.
Apoptosis and its clinical significance for bladder cancer therapy.
Kelly JD, Williamson KE, Irvine AE, Hamilton PW, Weir HP, Anderson NH, **Keane PF, Johnston SR.**
BJU Int. 1999 Jan;83(1):1-10. Review.
24.
Transcutaneous sacral neurostimulation for irritative voiding dysfunction.
Walsh IK, Johnston RS, Keane PF.
Eur Urol. 1999;35(3):192-6.
25.
Long-term results and complications of augmentation ileocystoplasty for idiopathic urge incontinence in women.
Kelly JD, Keane PF.
Br J Urol. 1998 Oct;82(4):609-10.
26.
Clinical response to an oral prostaglandin analogue in patients with interstitial cystitis.
Kelly JD, Young MR, Johnston SR, Keane PF.
Eur Urol. 1998;34(1):53-6.
27.
The haematuria clinic--referral patterns in Northern Ireland.
Ho ET, Johnston SR, Keane PF.
Ulster Med J. 1998 May;67(1):25-8.
28.
Characterization and assessment of a novel poly(ethylene oxide)/polyurethane composite hydrogel (Aquavene) as a ureteral stent biomaterial.
Gorman SP, Tunney MM, Keane PF, Van Bladel K, Bley B.
J Biomed Mater Res. 1998 Mar 15;39(4):642-9.
29.
The use of the bladder-tumour associated analyte test to determine the type of cystoscopy.
Kelly JD, Thompson TJ, Keane PF.
Br J Urol. 1998 Jan;81(1):180.

30.
Validation of a rapid method to quantify apoptosis in superficial bladder cancer.
Kelly JD, Hamilton PW, Williamson KE, Weir HP, McManus DT, **Keane PF**, Johnston SR.
Br J Urol. 1997 Dec;80(6):927-32.
31.
Mechanical performance of polyurethane ureteral stents in vitro and ex vivo.
Gorman SP, Jones DS, Bonner MC, Akay M, **Keane PF**.
Biomaterials. 1997 Oct;18(20):1379-83.
32.
Assessment of urinary tract biomaterial encrustation using a modified Robbins device continuous flow model.
Tunney MM, **Keane PF**, Gorman SP.
J Biomed Mater Res. 1997 Summer;38(2):87-93.
33.
Symptomatic outcome following clam ileocystoplasty.
Kelly JD, Kernohan RM, **Keane PF**.
Eur Urol. 1997;32(1):30-3.
34.
Somatostatinoma in a horseshoe kidney.
Walsh IK, Kernohan RM, Johnston CF, **Keane PF**.
Br J Urol. 1996 Dec;78(6):958-9. No abstract available.
35.
Comparative assessment of ureteral stent biomaterial encrustation.
Tunney MM, **Keane PF**, Jones DS, Gorman SP.
Biomaterials. 1996 Aug;17(15):1541-6.
36.
Problematic renal calculi presenting during pregnancy.
Thompson T, Kelly JD, **Keane PF**.
Ann R Coll Surg Engl. 1996 Jul;78(4):399. No abstract available.
37.
Development of a model for assessment of biomaterial encrustation in the upper urinary tract.
Tunney MM, Bonner MC, **Keane PF**, Gorman SP.
Biomaterials. 1996 May;17(10):1025-9.
38.
Laser lithotripsy for ureteric calculi: results in 250 patients.
Kelly JD, **Keane PF**, Johnston SR, Kernohan RM.

- Ulster Med J. 1995 Oct;64(2):126-30.
39. Eosinophilic vasculitis (Churg-Strauss syndrome) involving the urethra.
Walsh I, Loughridge WG, **Keane PF**.
Br J Urol. 1994 Aug;74(2):255-6. No abstract available.
40. Characterization of biofilm and encrustation on ureteric stents in vivo.
Keane PF, Bonner MC, Johnston SR, Zafar A, Gorman SP.
Br J Urol. 1994 Jun;73(6):687-91.
41. Benign urethral polyps.
Walsh IK, **Keane PF**, Herron B.
Br J Urol. 1993 Dec;72(6):937-8.
42. The artificial urinary sphincter. A new solution for incontinent patients.
Keane PF, Walsh IK, Kernohan RM.
Ulster Med J. 1993 Oct;62(2):132-6.
43. Malignant sphincter stricture treated by a permanent indwelling stent.
Walsh IK, **Keane PF**.
Br J Urol. 1993 Oct;72(4):522.
44. Bladder hamartoma.
McCallion WA, Herron BM, **Keane PF**.
Br J Urol. 1993 Sep;72(3):382-3.
45. Endometrial stromal sarcoma invading the bladder.
Keane PF, Herron B, McKenna M, Loughridge WG.
Br J Urol. 1993 Sep;72(3):381-2.
46. Fungal bezoar causing ureteric obstruction.
Keane PF, McKenna M, Johnston SR.
Br J Urol. 1993 Aug;72(2):247-8.
47. Transitional cell carcinoma in an ileal conduit.
Mulholland C, McCallion WA, Biggart JD, Kennedy JA, **Keane PF**.
Br J Urol. 1993 May;71(5):618-9.
48. Signet cell tumour of the bladder.
Keane PF, McGrady BG, Donaldson RA.
Br J Urol. 1993 Apr;71(4):488.

49.
Ileal conduit-enteric fistula.
McCallion WA, Wilson BG, Kennedy JA, Keane PF.
Br J Urol. 1993 Feb;71(2):230-1.
50.
Late metastasis from ovarian tumour. An unusual cause of hydronephrosis.
McCallion WA, Keane PF, Wilson BG, Loughridge WG.
Br J Urol. 1992 Jul;70(1):97-8.
51.
Anti-platelet monoclonal antibody P256 in the diagnosis of renal transplant rejection.
Carpani de Kaski M, Keane PF, Stuttle AW, Lavender JP, Williams G, Peters AM.
Clin Nucl Med. 1991 Aug;16(8):583-7.
52.
Hepatocellular carcinoma and treatment with cyproterone acetate.
Ohri SK, Gaer JA, Keane PF.
Br J Urol. 1991 Feb;67(2):213.
53.
Dilatation of the prostatic urethra with 35 mm balloon.
McLoughlin J, Keane PF, Jager R, Gill KP, Machann L, Williams G.
Br J Urol. 1991 Feb;67(2):177-81.
54.
Haemorrhage into an adrenal cyst.
Keane PF, Hyland JM.
Br J Clin Pract. 1990 Nov;44(11):527-8.
55.
Primary rectal lymphoma.
Keane PF, Scott R, Wood CB, Stewart I.
Br J Clin Pract. 1990 Nov;44(11):511-2.
56.
Pathological classification and follow-up of prostatic lesions initially diagnosed as "suspicious of malignancy".
Keane PF, Ilesley IC, O'Donoghue PN, Parkinson MC.
Br J Urol. 1990 Sep;66(3):306-11.
57.
Balloon dilatation of the prostate: technique and early results.
Keane PF, Charig CR, Hudd C, Shah PJ, Kellett MJ, Boyle J, Wickham JE, O'Donoghue EP.

Br J Urol. 1990 Apr;65(4):354-6.

58.

Primary rectal lymphoma and malignant lymphomatous polyposis. Two cases illustrating current methods in diagnosis and management.

Ohri SK, **Keane PF**, Sackier JM, Hutton K, Wood CB.

Dis Colon Rectum. 1989 Dec;32(12):1071-4.

PMID: 2591283

59.

Reappraisal of partial ileal bypass for the treatment of familial hypercholesterolemia.

Ohri SK, **Keane PF**, Swift I, Sackier JM, Williamson RC, Thompson GR, Wood CB.

Am J Gastroenterol. 1989 Jul;84(7):740-3.

60.

Chronic lymphocytic leukaemia presenting with bilateral breast involvement.

Gogoi PK, Stewart ID, **Keane PF**, Scott R, Dunn GD, Catovsky D.

Clin Lab Haematol. 1989;11(1):57-60

Management of the obstructed left colon by the one-stage intracolonic bypass procedure.

Keane PF, Ohri SK, Wood CB, Sackier JM.

Dis Colon Rectum. 1988 Dec;31(12):948-51.

62.

Response of the benign hypertrophied prostate to treatment with an LHRH analogue.

Keane PF, Timoney AG, Kiely E, Williams G, Stamp G.

Br J Urol. 1988 Aug;62(2):163-5.

63.

Leiomyosarcoma of the colon and rectum.

Keane PF, Farmer I, Crosbie R, Arnold AJ.

Ir Med J. 1986 Jul;79(7):190.

Book Chapters

1. Keane PF, Waxman J, Sikora K and Wood CB. Breast Cancer. In: Halnan K and Sikora K (eds.) Treatment of Cancer. Chapman and Hall London. 1989 Chap 21 367-85
2. Keane PF, Waxman J, Sikora K and Williams G. Urological Tumours. In: Halnan K and Sikora K (eds.) Treatment of Cancer. Chapman and Hall London. 1989 Chap 27. 503-31.
3. Bamias A, Keane PF, Krausz T, Williams G and Epenetos AA. Monoclonal antibody uptake by bladder carcinomas following intravesical administration. In: Monoclonal Antibodies. Applications in clinical oncology. Chapman and Hall London 1991 pp 261-71.
4. Keane PF. Spontaneous regression and responses in renal cell carcinoma. In: Urological Oncology. Williams G and Waxman J. (eds.) Edward Arnold London 1992 pp 237-43
5. Keane PF and Kernohan RM. Insertion of the kidney. In: Clinical Management of Renal Transplantation. McGeown M (ed). Kluwer Academic Publishers. London. 1992, 167-180.
6. Keane PF. Balloon Dilatation. In: Prostatic outflow obstruction:Clinical Investigation and Treatment. ed. PJR Shaw. Blackwell. London. 1994 51-60
7. Keane PF Kelly JD and McAleer JJ Genitourinary Malignancy in Oncology Spence RAJ and Johnston eds. Oxford Core Texts. 259-282 2001
8. Keane PF and Hagan C Urological Emergencies In: Oncologic emergencies. Spence RAJ and Johnston P eds. Oxford pp 99-115 2002

Invited Papers

1. Keane PF. Carcinoma of the extrahepatic bile ducts. St. Vincents Hospital Surgical Forum 1986; 55-60.
2. Keane PF, Kiely E, and Williams G. Buserelin in the treatment of benign prostatic hyperplasia: a preliminary report. Brit. J. Clin. Practice. 1987; (supplement 48) 41: 80-3.
3. Kelly JD, Keane PF. Advances In The Management Of Ureteric Calculi. Chirurgia International. 1996;3(4):12-14
4. JD Kelly, KE Williamson, BJ Duggan, HW Weir, P Hamilton, PF Keane, SR Johnston. Role of oligonucleotide therapy to enhance chemosensitivity in bladder cancer. Kyowa Update (Leeds medical Information) 1998; 26:1-4
5. J.D. Kelly, K.E.Williamson, B.J.Duggan, H.W. Weir, P.F. Keane, S.R. Johnston, The Role of Oligonucleotide therapy in enhancing chemosensitivity of bladder cancer Kyowa Update 1998; 26: 1-4.

Letters

1. Keane PF and Johnston SR. View of the Week. Br Med J. 1991; 303:1344
2. Thompson T, Kelly JD, Keane PF. Problematic renal calculi presenting during pregnancy. Ann Royal Coll Surg Eng. 1996; 78 (4): 39
3. Kelly JD, Keane PF. Pulmonary Embolus Complicating an Arterio-Venous Fistula. Br Medical Journal 1996;312(7027): 388.
4. Kelly JD, Williamson KE, Hamilton PW, Keane PF, Johnston SR. Bcl-2:Bax ratios in chronic lymphocytic leukaemia and their correlation with in vitro apoptosis and clinical response. (Letter) Br J Cancer. Accepted for publication Jan 1998.
5. The use of the bladder tumour associated analyte test to determine the type of cystoscopy. Br J Urol. 1998; 81(1): 180-181. (Letter)
6. Walsh IK, Keane PF, Loughridge WGG, Johnston SR, Stone AR. The effect of plantar pedal neurostimulation on the overactive bladder. J Urol May 2000.

Published Abstracts

1. Keane PF. The accuracy of clinical diagnosis in jaundice. Irish J. Med. Sci. 1984; 153:362.
2. Keane PF, Baer HP, Clanachan AS and Scott GW. Effects of

progesterone on human gallbladder contractility in vitro. *Dig. Dis. Sci.* 1984; 29:566.

3. Keane PF, Kiely E and Williams G. Medical castration for benign prostatic hypertrophy. *J. Urol.* 1987; 137:227A
4. Keane PF, Shah PJR, Wickham JEA, O'Donoghue EPN. Resection incision or dilatation for benign prostatic hypertrophy. *J. Urol.* 1989; 141:254A.
5. Keane PF, Kernohan RM and Johnston SR. Endoscopic management of pelvic fracture urethral injury. *Irish J Med Sci.* 1992; 161: 21
6. Keane P.f., Bonner M., Rooney P., Johnston s.r. & Gorman S.P. The nature and clinical significance of microbial biofilm on 'JJ' stents. Proc. of the British Urological Association Annual Meeting, Harrogate, 1993, p.6.
7. GORMAN S.P., BONNER M., KEANE P.F. & ROONEY P. The incidence and nature of microbial biofilm formation on indwelling polyurethane ureteral stents in vivo. *Pharmacotherapy* 1993 13, 281.
8. BONNER M., KEANE P.F. & GORMAN S.P., Characterisation and antibiotic sensitivities of isolates from ureteral stent biofilm. *Journal of Pharmacy and Pharmacology* 1993 45, 1445.
9. Keane P.f., Bonner M., Johnston s.r. & Gorman S.P. Biofilm and encrustation on ureteral stents: Is there a link? *Journal of Urology* 1994 151, 338A.
10. BONNER M., TUNNEY M., KEANE P.F. & GORMAN S.P., Fracture and encrustation of ureteric stent materials used for obstructive uropathy. *Pharmacotherapy* 1994 14, 367.
11. BONNER M., KEANE P.F. & GORMAN S.P., In vivo and in vitro investigations of polyurethane ureteral stent encrustation and fracture. *Journal of Pharmacy and Pharmacology* 1994 46, 1081.

12. TUNNEY M., KEANE P.F. & GORMAN S.P., Fracture and encrustation of synthetic materials used for ureteral stenting. *Journal of Pharmacy and Pharmacology* 1994 46, 1082.
13. TUNNEY M.M., BONNER M.C., HAZZARD R.A. , KEANE P. F., McLAUGHLIN J. A., GORMAN S. P. Atomic force microscopy, electron microscopy and confocal laser scanning microscopy of retrieved ureteral stents. *Pharmacotherapy* 1995 15, 379.
14. KEANE P.F., BONNER M.C., GORMAN S.P. Encrustation and biofilm on ureteric stents. *Proc. Irish Soc. Urology*, Belfast 1995 p.5.
15. TUNNEY M.M., BONNER M.C., GORMAN S.P., KEANE P.F. Evaluation of encrustation on biomaterials in urine. *Proc. Irish Soc. Urology*, Belfast 1995 p.5.
16. BONNER M.C., KEANE P.F., GORMAN S.P. Effect of growth conditions on the cell surface characteristics of ureteral stent biofilm isolates and their adherence to polyurethane. *Journal of Pharmacy and Pharmacology* 1995 47, 1095
17. TUNNEY M.M., KEANE P.F., GORMAN S.P. Influence of conditioning films on biomaterial encrustation as determined by dynamic contact angle measurements. *Journal of Pharmacy and Pharmacology* 1995 47, 1096
18. TUNNEY M.M., BONNER M.C., KEANE P.F., GORMAN S.P. In-situ changes in ureteral stent surface microrugosity determined by atomic force microscopy. *Journal of Pharmacy and Pharmacology* 1995 47, 1096
19. TUNNEY M.M., GORMAN S.P. & KEANE P.F. Biomaterial surface characteristics: Effect on encrustation of ureteral stents. *Journal of Urology* 1996 155, 473A.
20. KEANE P.F., TUNNEY M.M. & GORMAN S.P. Influence of biomaterial surface characteristics on encrustation of ureteric stents. *British Journal of Urology* 1996 77, 190.

21. JONES D.S., BONNER M.C., KEANE P.F. & GORMAN S.P. Physiological effects on bacterial adherence to ureteral stents. *Pharmacotherapy* 1996 16, 811.
22. BONNER M.C., TUNNEY M.M., KEANE P.F. & GORMAN S.P. Factors affecting bacterial adherence to medical device biomaterials. *Pharmacotherapy* 1996 16, 801.
23. TUNNEY M.M., KEANE P.F. & GORMAN S.P. Influence of biomaterial surface characteristics on encrustation of ureteral stents. *Proceedings of the 15th Pharmaceutical Technology Conference, Oxford* 1996 2a, 330-333.
24. BONNER M.C., AKAY M., JONES D.S., KEANE P.F. & GORMAN S.P. Assessment of the mechanical properties of polyurethane ureteral stents. *Proceedings of the 15th Pharmaceutical Technology Conference, Oxford* 1996 2a, 333-336.
25. TUNNEY M.M., BONNER M.C., KEANE P.F., GORMAN S.P. Examination of the surface morphology of retrieved ureteral stents. *Proceedings of the 5th Biennial Surface Science Colloquium University of Ulster, Coleraine* 1996, 11.
26. TUNNEY M.M., KEANE P.F., GORMAN S.P. Effect of biomaterial surface characteristics on ureteral stent encrustation. *Proceedings of the 5th Biennial Surface Science Colloquium University of Ulster, Coleraine* 1996, 12.
27. JONES D.S., BONNER M.C., AKAY M., KEANE P.F., GORMAN S.P. Characterisation of sequential interpenetrating polymer networks as urinary biomaterials. *Proceedings of the 5th Biennial Surface Science Colloquium University of Ulster, Coleraine* 1996, 14.
28. BONNER M.C., JONES D.S., AKAY M., GORMAN S.P., KEANE P.F. Dynamic mechanical analysis of retrieved polyurethane ureteral stents. *Proceedings of the 5th Biennial Surface Science Colloquium University of Ulster, Coleraine* 1996, 15.
29. JONES D.S., BONNER M.C., KEANE P.F., GORMAN S.P., AKAY M.

Characterisation of polyurethane/polymethylmethacrylate networks as urinary biomaterials. European Journal of Pharmaceutical Sciences 1996, 4, S177

30. TUNNEY M.M., KEANE P.F., GORMAN S.P. Encrustation assessment using the modified Robbins device. European Journal of Pharmaceutical Sciences 1996, 4, S177
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