was mentioned in 197 patients (distal ureter – 112, 57%; mid ureter – 36, 13% and proximal ureter – 59, 30%). The stone free rate was 86% (169/197 patients). Post procedure stent was inserted in 177 patients. Thirty-three (12%) had complications with majority being UTIs (n = 11) and ureteric perforation (n = 8). Other urinary complications (n = 9) included dysuria, stent irritation, pain, sepsis and stent migration whilst obstetric complications (n = 5) included premature uterine contractions and premature delivery.
Conclusions: Stone treatment using ureteroscopic techniques in pregnancy can achieve a high success rate with a small but not insignificant risk of complication.

E157
Urolithiasis in patients with neobladder

B. Komyakov, B. Guliev, A.V. Sergeev. *Mechnikov's Medical University, Dept. of Urology, St. Petersburg, Russia*

Introduction & Objectives: To evaluate the frequency of stone formation in patients with neobladders after urinary diversion.
Material & Methods: Between May 1995 and March 2013, in our department 348 consecutive patients underwent radical cysectomy. There were 281 (80.7%) men and 67 (19.3%) women and their ages ranged from 22 to 82 years. Types of urinary derivation included: Orthotopic gastrocystoplasty in 22 (6.3%) patients, orthotopic ileal neobladder in 220 (63.2%), sigmoid orthotopic neobladder in 22 (6.3%), bilateral ureterosigmoidostomy in 40 (11.5%), heterotopic continent urinary diversions in 8 (2.3%) and ureterocutaneostomy in 36 (10.3%) patients. We always used Vycryl 3/0 for formation of urinary neobladder and did not use nonabsorbable staples. The clinical assessment involved cystoscopic findings, ultrasound investigations and imaging by CT and/or MRI. Mean stone size was 3.3 cm (range 3.0–4.2 cm). All stones had density more than 1050 HU.
Results: Neobladder stones were diagnosed in 5 (1.9%) of 264 patients who underwent radical cystectomy with orthotopic neobladder. All patients underwent orthotopic ileal bladder substitution as a method of urinary diversion. All patients had large stones with high density. Because of neobladder, stones were removed only openly. No complications occurred during or within postoperative period.
Conclusions: The use of absorbable suture materials for the formation of orthtopic neobladder significantly reduces the likelihood of stone formation in the postoperative period.

E158
Urinary stone composition analysis – five-year experience of a major Portuguese urological center

A. Nunes, S. Pereira, A. Sandul, R. Garcia, R. Ramos, R. Silva, S. Gaspar, T. Leitão, T. Lopes. *Centro Hospitalar Lisboa Norte, Dept. of Urology, Lisboa, Portugal*

Introduction & Objectives: Assessment of stone composition can be a helpful adjunct to a metabolic evaluation of patients with stone disease. There is important information from such investigation that can direct metabolic evaluation and aid with preventive therapy. Stone composition can also determine the recurrence risk status of stone formers. This retrospective descriptive study aimed to evaluate urinary stone composition analysis at our institution during a five years period of time.
Material & Methods: Stone analysis reports of all patients submitted to urinary stone treatment procedures over a five year period at our institution – Centro Hospitalar Lisboa Norte – were analyzed (from April 2008 to March 2013). The identified patients were screened for age, gender, stone composition and number of substance mixture.
Results: From a total 537 stone analysis reports, 35 were excluded for insufficient stone material for a valid analysis. From 502 valid reports, 60% (n = 301) were from male patients and 40% (n = 201) were from female patients. Mean patient age was 51.7 (ranging from 18 to 83 years old). A total of 7 different mineral components were identified. 96.0% (n = 482) of all the stones had Calcium Oxalate (Whewellite/Wheddelite), 60.8% (n = 305) had Calcium Phosphate (Apatite/Hydroxylapatite), 23.9% (n = 120) had Uric Acid (Uricite), 20.1% (n = 101) had Magnesium Ammonium Phosphate (Struvite), 4.6% (n = 23) had Ammonium Urate, 3.8% (n = 19) had Calcium Carbonate (Aragonite) and 1.8% (n = 9) had Cystine. Most of the stones had 2 (62.4%), 3 (21.5%) or 4 (2.0%) mineral components. Only 14.1% (n = 71) were chemically homogeneous. Calcium Oxalate and Calcium Phosphate were highly prevalent and equally distributed in both genders. Uric Acid (30.9% vs 13.4%) and Ammonium Urate (6.3% vs 2.0%) were more prevalent in male patients. In female patients, Magnesium Ammonium Phosphate (29.9% vs 13.6%), Calcium Carbonate (5.5% vs 2.7%) and Cystine (3.0% vs 1.0%) were more prevalent.
Conclusions: Urinary calculosis typical of adult age and featuring mainly calcium oxalate and phosphate is currently more frequent in economically developed countries. Our analysis confirms this fact in our population. The prevalence of this type of stones varies on account of environmental factors, especially dietary intake and lifestyle, although they are less useful diagnostically as they occur in several pathological entities. Other mineral components have a different gender distribution and seem to be less frequent. Despite being less influenced by environmental conditions they can suggest different specific metabolic conditions. Mineral stone analysis is still an important tool in managing stone disease diagnosis, treatment and prevention.

E159
Urolithiasis in the XXI century: Bibliometric analysis of scientific publications in the last decade

I. Campos Braga[1], L.F. Branco[2], J.F. Cabral[2], N. Louro[2], V. Cavadas[2], A. Fraga[2]. *[1]ICVS – Life and Health Research Institute – Health Sciences School – University of Minho and Centro, Dept. of Urology, Porto, Portugal; [2]Centro Hospitalar Do Porto – Hospital De Santo António, Dept. of Urology, Porto, Portugal*

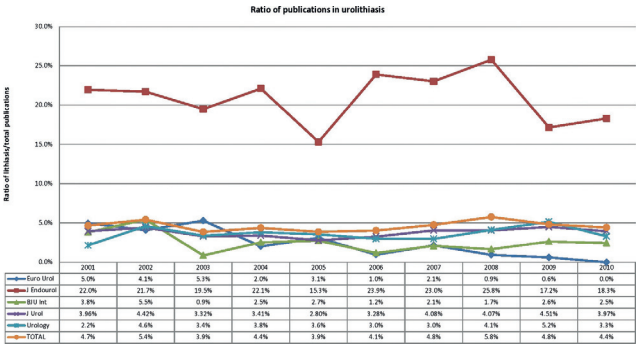
Introduction & Objectives: Urinary stone disease prevalence seems to be increasing. It is important for urologists to generate and use convincing evidence to provide best quality patient care. As the prevalence of lithiasis is growing and there has been an increase in technologies and minimally invasive techniques in all areas of surgery, it would be expected that the total number of publications about this disease should increase. We hypothesized if there is also an evident trend towards the increase of urolithiasis' related publications in urology journals. We evaluated the publications in five prestigious journals of urology journals over the last decade, in order to perform a bibliometric analysis of every article published related to urinary lithiasis.
Material & Methods: An electronic search was performed using PubMed and all issues BJU Int; Eur Urol; J Endourol; J Urol and Urology were consulted from 2001 to 2010. All articles related to renal and ureteral lithiasis were collected, recorded and analyzed.
Results: A total of 30,847 articles were published in these five prestigious journals (Table 1). The J Urol was the journal with the most number of articles published per year with an average of 1146 papers. J Endourol was the publication with less publicated articles in this decade, with an average of 231 papers per year.
There was a total of 1.425 urolithiasis related papers in all journals. The J Endourol was the journal with the great number

of urolithiasis related articles published in the period of analysis, with a total of 545 articles.
The ratio urolithiasis related articles and the total articles published per year in each journal was analyzed (graphic 1).
The J Endourol was the publication with the greatest ratio. Eur Urol was the journal with less publications in urolithiasis, with ratios ranging from 0 in the year of 2010 and 5.3% in the year of 2003, with a decrease in the last years. All the other journals maintained a stable ratio of publications.
Conclusions: Urolithiasis as a great subject to urologists' practice would be expected to be an important source of original research studies in the more active urology journals. However, our study showed that, during the last decade, there was a steady number of urolithiasis related articles published in several journals.

	Year	Total	Lithiasis	Lith %	Design (%)		Type (%)				Subject (%)				
					Prosp	Retro	Clin	Lab	Rev	Case	Med	SWL	URS	PNL	Misc
British J Urology International	2001	417	16	3,8	84,6	15,4	50	18,8	31,2	-	43,8	37,5	6,3	-	12,5
	2002	422	23	5,5	64,7	35,3	52,2	26,1	21,7	-	56,5	8,7	8,7	13	13
	2003	576	5	0,9	66,7	33,3	20	40	40	-	60	20	-	-	20
	2004	667	17	2,5	35,5	64,7	82,4	17,6	-	-	17,6	23,5	29,4	29,4	-
	2005	655	18	2,7	40	60	77,8	16,7	5,6	-	35	15	10	35	5
	2006	594	7	1,2	33,3	66,7	71,4	14,3	14,3	-	40	10	10	30	10
	2007	621	13	2,1	54,5	45,5	69,2	15,4	15,4	-	20	40	6,7	33,3	-
	2008	659	11	1,7	50	50	72,7	9,1	18,2	-	18,2	36,4	9,1	27,3	9,1
	2009	643	17	2,6	62,5	37,5	70,6	5,9	23,5	-	27,8	44,4	11,1	11,1	5,6
	2010	610	15	2,5	26,7	73,3	66,7	33,3	-	-	43,8	25	18,8	6,3	6,3
European Urology	2001	282	14	5	45,5	54,5	78,6	21,4	-	-	50	21,4	7,1	7,1	14,3
	2002	195	8	4,1	57,1	42,9	50	12,5	25	12,5	37,5	12,5	25	25	-
	2003	226	12	5,3	50	50	75	-	25	-	43,8	31,3	18,8	6,3	-
	2004	246	5	2	50	50	60	40	-	-	28,6	42,9	28,6	-	-
	2005	289	9	3,1	22,2	77,8	77,8	11,1	11,1	-	-	50	20	30	-
	2006	417	4	1	100	-	60	40	-	-	20	60	20	-	-
	2007	699	15	2,1	30,8	69,2	66,7	13,3	-	20	6,7	46,7	13,3	33,3	-
	2008	644	6	0,9	25	75	66,7	33,3	-	-	16,7	16,7	-	66,7	-
	2009	651	4	0,6	50	50	50	50	-	-	75	-	25	-	-
	2010	460	0	-	-	-	-	-	-	-	-	-	-	-	-
J Endourology	2001	164	36	22	37,1	62,9	66,7	2,8	16,7	13,9	7,9	36,8	31,6	21,1	2,6
	2002	129	28	21,7	37	63	75	3,6	10,7	10,7	12,1	33,3	15,2	39,4	-
	2003	159	31	19,5	48,3	51,7	73,3	3,3	20	3,3	25,8	35,5	22,6	6,5	9,7
	2004	190	42	22,1	41	59	66,7	7,1	16,7	9,5	18,2	25	22,7	27,3	6,8
	2005	235	36	15,3	29,4	70,6	69,4	5,6	19,4	5,6	18,4	26,3	26,3	28,9	-
	2006	226	54	23,9	46,2	53,8	68,5	3,7	20,4	7,4	18,6	28,8	25,4	25,4	1,7
	2007	291	67	23	35,9	64,1	79,1	4,5	13,4	3	11	26	24,7	32,9	5,5
	2008	427	110	25,8	50	50	65,5	14,5	13,6	6,4	12,3	17,2	21,3	44,3	4,9
	2009	344	59	17,2	42,1	57,9	54,2	35,6	8,5	1,7	5	10	5	70	10
	2010	339	62	18,3	38,3	61,7	82,3	4,8	11,3	1,6	14,8	19,7	23	42,6	-
J Urology	2001	1135	45	4	57,8	42,2	62,2	-	26,7	11,1	39,6	33,3	14,6	8,3	4,2
	2002	1334	59	4,4	49,1	50,9	72,9	3,4	22	1,7	40,3	28,4	17,9	4,5	9
	2003	1384	46	3,3	45,7	54,3	73,9	-	21,7	4,3	32,7	30,6	18,4	10,2	8,2
	2004	1230	42	3,4	42,9	57,1	69	2,4	21,4	7,1	27,3	22,7	18,2	20,5	11,4
	2005	1392	39	2,8	55,3	44,7	74,4	2,6	20,5	2,6	58,5	14,6	12,2	12,2	2,4
	2006	976	32	3,3	64,5	35,5	84,4	3,1	12,5	-	31,4	25,7	11,4	25,7	5,7
	2007	931	38	4,1	67,7	32,3	63,2	18,4	18,4	-	43,5	13	17,4	21,7	4,3
	2008	959	39	4,1	50	50	71,8	12,8	12,8	2,6	36,6	14,6	24,4	17,1	7,3
	2009	1065	48	4,5	45,7	54,3	81,3	4,2	10,4	4,2	50	13	13	20,4	3,7
	2010	1058	42	4	30	70,7	90,5	4,8	4,8	-	54,3	19,6	8,7	15,2	2,2
Urology	2001	693	15	2,2	38,5	61,5	73,3	13,3	-	13,3	37,5	12,5	25	6,3	18,8
	2002	607	28	4,6	42,9	57,1	71,4	-	14,3	14,3	34,5	13,8	17,2	27,6	6,9
	2003	647	22	3,4	45,5	54,5	59,1	-	13,6	27,3	29,2	37,5	4,2	25	4,2
	2004	626	24	3,8	39,1	60,9	70,8	4,2	8,3	16,7	38,5	7,7	23,1	23,1	7,7
	2005	702	25	3,6	36	54	76	-	12	12	17,4	39,1	21,7	21,7	-
	2006	700	21	3	23,8	76,2	57,1	-	4,8	38,1	27,3	18,2	13,6	40,9	-
	2007	667	20	3	30	70	85	-	5	10	13,6	27,3	22,7	36,4	-
	2008	653	27	4,1	40,7	59,3	92,6	-	3,7	3,7	20,7	24,1	20,7	31	3,4
	2009	794	41	5,2	32,4	67,6	70,7	9,8	4,9	14,6	54,1	18,9	13,5	10,8	2,7
	2010	844	28	3,3	42,9	57,1	96,4	-	3,6	-	53,6	14,3	3,6	28,6	-

Case: case report; Clin: clinical research; Lab: laboratory/technical research; Lith %: percentage of total articles on lithiasis; Med: epidemiology, diagnosis and medical management; Misc: miscellaneous; PNL: percutaneous nephrolithotomy; Rev: review; SWL: extracorporeal shockwave lithotripsy; URS: ureteroscopy

Table 1.



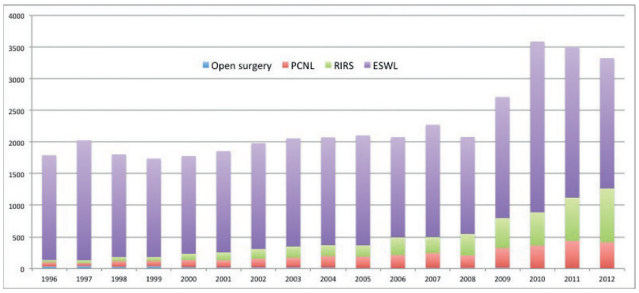
Graphic 1. Ratio of publications in urolithiasis/total publications.

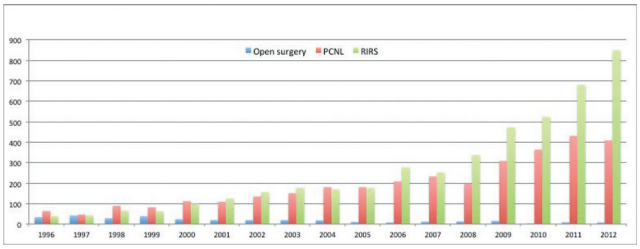
E160

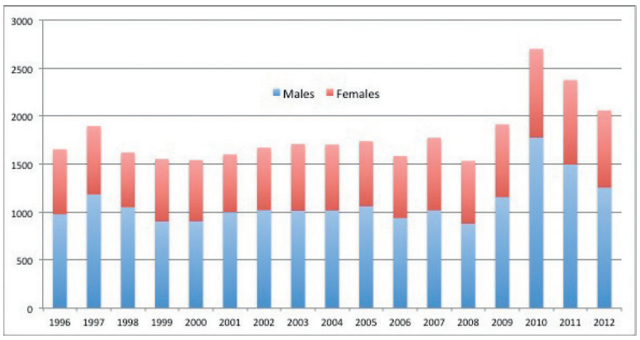
Trends in treatment of renal calculi 1996–2012 in Denmark

K.H. Andreassen, T.B. Pedersen, P.J.S. Osther. *Hospital Littlebelt, University of Southern Denmark, Urological Research Center, Fredericia, Denmark*

Introduction & Objectives: The aim of this study was to investigate trends in treatment of renal calculi in Denmark.
Material & Methods: Data concerning annual number of procedures concerning treatment of renal calculi was collected from the national Danish Health Registry ("Landspatientregisteret") under the Danish Health and Medicines Authority. The figures include treatment for the entire country for both public and private hospitals. Data were available for the period from 1996 to 2012.
Results: ESWL is the predominant treatment for renal calculi. In the period from 1996 to 2005 80–90% of renal stones were treated with ESWL, but as the number PCNL and especially RIRS has increased over the last 6 years, the relative number of stones treated with ESWL has dropped to 62% (fig. 1).
During the period the number of PCNL performed has increased slowly, and the number of RIRS performed has increased rapidly, especially over the last 5 years (fig. 2).
The number of ESWL procedures for renal calculi has been fairly constant except for a rise in 2010, which cannot be accounted for. The gender distribution has been constant during the whole period, with an average male:female ratio of 61:39 (fig. 3).
The total number of treatments for renal calculi was constant around 2000 per year from 1996–2008, but has increased to around 3000–3500 the last 3 years.







Conclusions: The total number of treatments for renal calculi has increased during the last 4, and the proportion of RIRS and PCNL has increased.