Sessions scientifiques III, IV, V, VI
Vendredi (p.m.), le 9 novembre 2012

Les sessions scientifiques suivantes ont été rendues possibles grace à la contribution non restrictive de nos partenaires :

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Session scientifique III

Objectifs éducatifs : Les participants apprendront le rôle de la mesure de la testosterone sérique dans le suivi du traitement de dérivation androgénique. Une mise à jour sur la suppression intermittent androgénique de même que la théorie de l`échappée androgénique seront révises et ainsi mieux compris par l'auditoire.

Session scientifique IV
Concours des résidents et fellows

Objectifs éducatifs : À la fin de cette session, le participant connaîtra les nouveaux développements en recherche clinique et fondamentale. Il pourra apprecier les travaux de recherche des résidents et fellows en urologie.
Modérateurs : Michel Carmel et Jean-Baptiste Lattouf

13 h 40 - 13 h 49
Long-Term Use of Solifenacin in Pediatric Patients with Overactive Bladder: Extension of a Prospective Open-Label Study

Geneviève Nadeau; Annette Schroder; Katherine Moore; Lucie Genois; Ève Pellerin; Stéphane Bolduc
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Introduction: Pediatric urologists frequently encounter children presenting symptoms of bladder overactivity. Optimal anticholinergic pediatric dosage is not well known. Historically, oxybutinin has been effective in treating overactive bladder but is poorly tolerated. Tolterodine has been shown to be as effective as oxybutinin with fewer side effects (S/E). Newer agents, such as solifenacin, could be an alternative but their use in children as not been widely utilized. Therefore, the objective was to evaluate the effect of Solifenacin to treat urinary incontinence in children with overactive/neurogenic bladder that were refractory to oxybutinin or tolterodine treatment.
Methods: Paediatric patients presenting refractory overactive bladders with incontinence were offered to enter a prospective off-label protocol using adjusted-dose regimens of solifenacin (1.25 to 10 mg). Inclusion criteria were: absence of correctable neurological anomalies (MRI), failure of symptoms improvement under intensive behavioural and medical (oxybutinin or tolterodine) therapies and/or significant S/E with other agents. The follow-up consisted of voiding diaries, post-void residuals, urine cultures, ultrasound and UDS. Families were questioned for continence, S/E, compliance, change in behaviour and quality of life. The primary end-point was efficacy toward continence and the secondary end-points were tolerability and safety.
Results: A total of 237 patients (112 girls, 125 boys) were enrolled. Fifty-two patients with neurogenic bladder (NDO) (24 on CIC) and 185 with overactive bladder (OAB) completed a minimum of 6-months follow-up. Mean age at initiation was 9.1 and 9.7 years and they were on solifenacin for a mean of 17 and 32 months for OAB and NDO respectively. Urodynamic capacity for OAB patients improved from 125±51 ml to 305±96 ml and uninhibited contractions decreased from 72±24 to 10±12 cmH2O. For NDO patients, urodynamic capacity improved from 151±80 ml to 325±164 ml and uninhibited contractions decreased from 64±27 to 19±17 cmH2O. Continence improved every OAB patients (47 dry, 50 significantly and 88 moderately improved) and for NDO patients (17, 17, 18). Patients reported mild or moderate side effects in 15% of cases and 3 withdrew from the protocol due to S/E. Seven patients developed significant post-void residuals (>20%). Blood tests and EKG remained normal.
Conclusion: In the presence of overactive bladder refractory to oxybutinin or tolterodine, solifenacin is an effective alternative to improve symptoms in children. Tolerability was acceptable and the adjusted-dose regimen appeared safe.

13 h 49 - 13 h 58
Comparison entre l'échographie et la scintigraphie à l'acide dimercaptosuccinique dans l'évaluation des cicatrices renales

Maryse Marceau-Grimard; Christian Cote; Stephane Bolduc; Marcel Dumont; Katherine Moore
CHUQ-CHUL

Introduction et objectifs : L'objectif de cette étude est de rapporter les résultats et les coûts de la prostatectomie ouverte comparé à la prostatectomie robot-assistée dans un centre hospitalier de soins tertiaires.
Matériels et méthodes : Une analyse rétrospective a été faite des 200 derniers patients opérés par un chirurgien expérimenté avec la voie ouverte (MG) et des 200 derniers patients opérés par un chirurgien expérimenté avec la voie robot-assistée (LG), et ce, en date du 1r octobre 2011.
Résultats : Les 2 groupes avaient des caractéristiques démographiques similaires, incluant l'âge moyen (64,7 vs. 64,2), l'indice de masse corporelle (27,2 vs. 27,2), et le taux de chirurgie abdominale antérieure (31% vs. 27%). Le groupe ouvert comportait plus de cancers à haut risque comparé au groupe robot (32,5% vs. 8,5%). La durée opératoire était moindre pour les chirurgies ouvertes, avec un temps opératoire peau-à-peau moyen de 114,2 mins contre 233,6 mins. Le groupe ouvert a présenté des pertes sanguines moyennes plus élevées (402,8 ml vs. 287,5 ml). Le taux de transfusion sanguine a été comparable, soit 1,5% (3/200) pour le groupe ouvert et 3,5% (7/200) pour le groupe robot. Pour les 100 derniers cas, la durée d'hospitalisation moyenne était de 1,78 jours pour la chirugie ouverte et 1,76 jours pour la chirurgie robot-assistée. Le groupe ouvert avait plus de cancers de haut grade dans la pathologie chirurgicale, avec un score de Gleason 8 ou plus dans 23,5% des cas comparé à 3,5% dans le groupe robot. Le taux de marges chirurgicales positives était comparable à 31% pour la chirurgie ouverte et 24,6% pour la chirurgie robot-assistée. Le taux était aussi comparable après stratification entre les stades pT2 et pT3. Les

résultats postopératoires préliminaires ont révélé un taux d'incontinence urinaire à l'effort à 12 mois comparable à 3,9% pour la voie ouverte et 5,8% pour la voie robot-assistée. Le taux de survie sans récidive biochimique à 12 mois était aussi comparable à 95,7% et 94,3% respectivement. Le coût supplémentaire pour la prostatectomie robot-assistée a été calculé à 5629$ par cas.
Conclusions : Dans cette étude, la prostatectomie par voie ouverte a présenté un temps opératoire plus court et un coût plus faible comparé à la chirurgie robot-assistée. Le taux de transfusion sanguine, la durée d'hospitalisation et le taux de marges chirurgicales positives étaient comparables.

14 h 07 - 14 h 16
Cost-effectiveness analysis of sacral neuromodulation in refractory overactive bladder: A Canadian perspective

Hamid Sadri;[1] Jacques Corcos;[2] Neil E. Dwyer;[3] Gary J. Gray;[4] Magali Robert;[5] Jerzy B. Gajewski;[6] Magdy M. Hassouna;[7] Le Mai Tu;[8] Sophie Ramsay[8]
[1]Medtronic of Canada; [2]Jewish General Hospital; [3]Moncton Hospital; [4]Royal Alexandra Hospital; [5]Foothills Hospital; [6]Queen Elizabeth II Hospital; [7]Toronto Western Hospital; [8]Centre hospitalier universitaire de Sherbrooke

Introduction: A substantial number of refractory overactive bladder patients fail conservative treatment with optimized medical therapy (OMT) and may benefit from minimally invasive procedures, including sacral neuromodulation (SNM) or onabotulinumtoxin-A (BoNT-A) injection. Currently, the safety, efficacy and effectiveness are conventional hurdles for patient access. With the evolving treatment options actually available, the efficiency evaluation of a treatment modality which is considered in the health economic analysis should be implemented with the affordability issue through budget impact analysis. The goal of this study was to estimate the cost-effectiveness of SNM vs. OMT and BoNT-A.
Methods: An economic Markov model with Monte Carlo simulation was used to assess the incremental cost-effectiveness ratio (ICER) of SNM vs. BoNT-A and OMT. The model calculated the ICER in deterministic (base-case) and probabilistic (sensitivity) analysis from a Canadian provincial payer's perspective over a 10-year time horizon with 9-month Markov cycles. The willingness-to-pay or acceptability curve for ICER calculation was assumed at $50,000. Clinical data, healthcare resource utilization and utility scores were acquired from recent publications and an expert

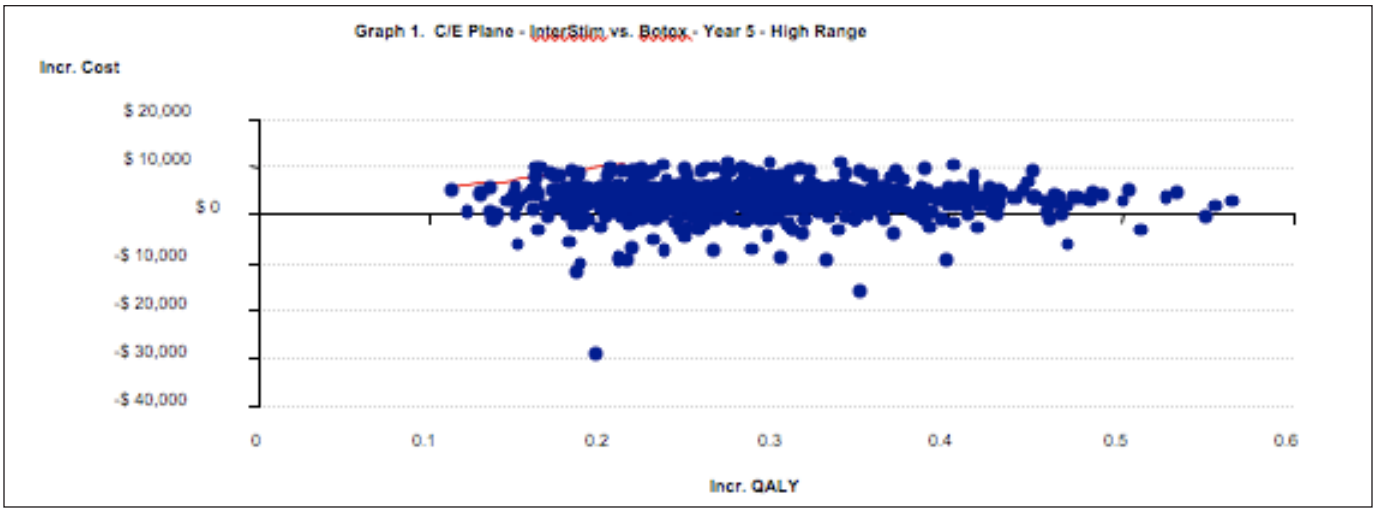

Fig. 1.

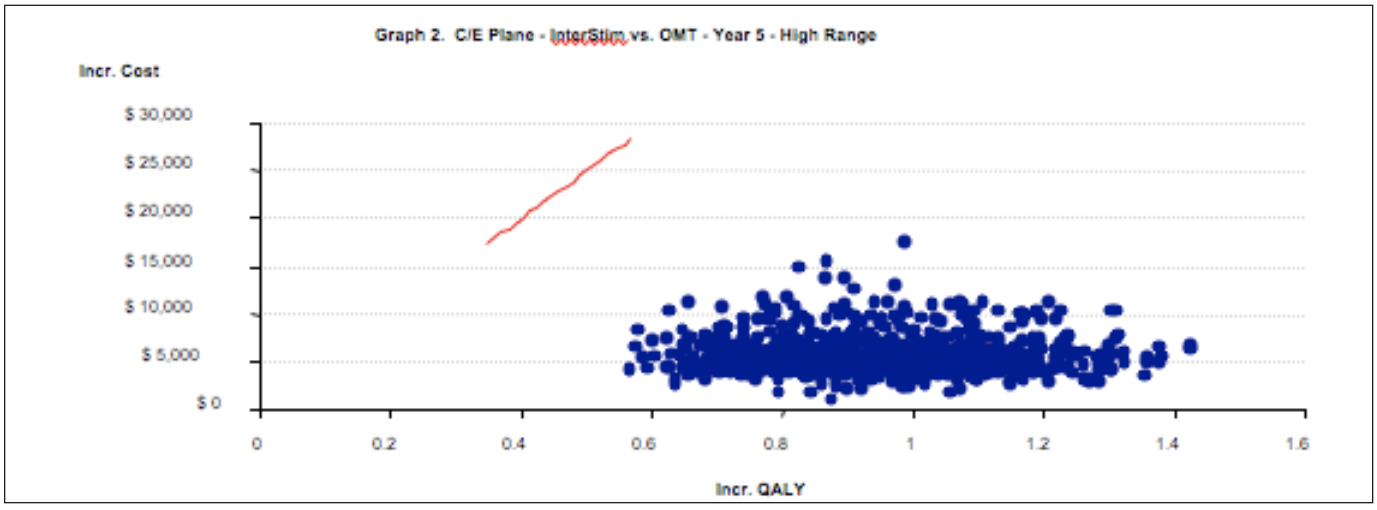

Fig. 2.

Table 1 Deterministic Analysis

INTERSTIM vs. BoNT-A

	Incr. Cost			Incr. QALY			C/QALY		
	Mean	Low Range	High Range	Mean	Low Range	High Range	Mean	Low Range	High Range
1 year	$7,237	$7,574	$6,709	0.05	0.05	0.05	$144,067	$150,769	$133,558
2 years	$4,318	$4,884	$3,591	0.09	0.09	0.09	$44,837	$50,708	$37,288
4 years	-$651	$277	-$1,691	0.19	0.19	0.19	Interstim Dominant	$1,436	Interstim Dominant
5 years	-$2,775	-$1,701	-$3,941	0.24	0.24	0.24	Interstim Dominant	Interstim Dominant	Interstim Dominant
10 years	-$9,402	-$7,698	-$11,129	0.51	0.51	0.51	Interstim Dominant	Interstim Dominant	Interstim Dominant

INTERSTIM vs. OMT

	Incr. Cost			Incr. QALY			C/QALY		
	Mean	Low Range	High Range	Mean	Low Range	High Range	Mean	Low Range	High Range
1 year	$8,878	$8,812	$9,008	0.19	0.19	0.19	$45,999	$45,655	$46,672
2 years	$5,888	$5,847	$6,029	0.38	0.38	0.38	$15,130	$15,024	$15,491
4 years	$348	$335	$523	0.76	0.76	0.76	$455	$438	$684
5 years	-$2,233	-$2,236	-$2,039	0.94	0.94	0.94	Interstim Dominant	Interstim Dominant	Interstim Dominant
10 years	-$11,447	-$11,347	-$11,246	1.76	1.76	1.76	Interstim Dominant	Interstim Dominant	Interstim Dominant

Fig. 3.

Table 2 Probabilistic Analysis
(Willingness-To-Pay = $50,000)

INTERSTIM vs. BoNT-A

	% < C/E threshold		
	Mean	Low Range	High Range
1 year	0.50%	0.10%	0.40%
2 years	26.70%	21.60%	48.60%
4 years	94.40%	95.60%	93.90%
5 years	93.20%	94.60%	89.40%
10 years	85.80%	88.60%	77.70%

INTERSTIM vs. OMT

	% < C/E threshold		
	Mean	Low Range	High Range
1 year	17.90%	22.00%	9.40%
2 years	99.90%	99.80%	100.00%
4 years	99.60%	99.60%	100.00%
5 years	99.60%	99.60%	100.00%
10 years	64.70%	61.40%	78.00%

Fig. 4.

panel of 7 Canadian surgeons. Cost data (2011-Dollars) were derived from provincial health insurance policy, drug benefit formulary, and hospital data. All cost and outcomes were discounted at 3% rate.
Results: The annual incremental cost of SNM vs. BoNT-A was $7,237 in year-1 and -$9,402 in year-10 (Fig. 1), and between $8,878 to -$11,447 vs. OMT (Fig. 2). In the base-case deterministic analysis, the ICER for SNM vs. BoNT-A and OMT were within the acceptable range ($44,837 and $15,130, respectively) at the second year of treatment, with SNM being dominant in the consequent years (Fig. 3). Furthermore, the probability of ICER obtained from the base-case deterministic analysis of being below the acceptability curve was >94.4% for SNM vs. BoNT-A at year 4 and >99.9% for SNM vs. OMT at year 2 (Fig. 4). Finally, graphs 1 and 2 show the cost-effectiveness of SNM when compared to BoNT-A and OMT modalities at year-5.
Conclusions: SNM is a cost-effective treatment option for the management of patients with refractory overactive bladder when compared to either BoNT-A or OMT. From a Canadian payers' perspective, SNM should be considered as first line treatment option in patients with refractory overactive bladder.

14 h 16 - 14 h 25
Optimal outcome after permanent seed prostate brachytherapy: The TRIFECTA analysis

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Introduction: The purpose of this study was to assess in a combined analysis (*Trifecta*) the optimal outcome for patients treated with exclusive permanent seed PB, as defined by the likelihood of achieving disease control and preserve normal urinary and sexual functions.
Methods: 384 patients with localized prostate cancer were treated with PB at our institution between 2005 and 2010. Excluding patients without erectile dysfunction (ED) not responding to medication (grade 3 from the Common Terminology Criteria for Adverse Events version 3.0, CTCAE v 3.0) and with a minimal follow-up of one year, a total of 233 patients were considered for the analysis. All patients were implanted with ^{125}I using an intraoperative, inverse planned PB technique at a dose of 144 Gy. Biochemical control (BC), genito-urinary (GU) and sexual toxicity rates were assessed. Patients with concurrent BC, no GU toxicity and preserved sexual potency at 1, 2, 3, and 4 years were classified in the *Trifecta* group. BC was defined as prostate-specific antigen (PSA) level lower than the preceding PSA and as a PSA ≤0.5 ng/ml for years 1 and 2 and for years 3 and 4, respectively. Absence of GU toxicity was defined as an International Prostate Symptom Score (IPSS) of no more than three points higher than baseline score at 1 year and as the complete absence of GU toxicity (CTCAE v 3.0 grade 0) on years 2 to 4. Patients with Grade 0 to 2 ED (2=medication necessary) were deemed as sexually potent. Multivariate analysis was performed to predict for *Trifecta* at 1, 2 and 3 years in 111 patients with complete data set on each point in time from years 1-3
Results: *Trifecta* endpoints were achieved in 70% (n=163), 47.4% (n=83), 48.1% (n=50) and 54.5% (n=30) of the patients on years 1 to 4 after PB, respectively. The BC rates were 100%, 76.2%, 64.6% and 75.4% at 1, 2, 3 and 4 years, respectively. The corresponding potency rates were 93,6%, 90%, 93,7% and 95,2%, while the rates of Grade 0 GU toxicity were 74.2%, 61%, 73.3% and 74.6%. In the multivariate analysis, prostate D90 (p=0.047) and V100 (p=0.021) on year 1, and age at year 2 (p=0.038) and 3 (*p*=0.032) were significant predictors of *Trifecta*.
Conclusion: The *Trifecta* endpoints were achieved approximately in 50% of the patients in the time range varying from years 2 to 4 after PB. The most common reason excluding patients from the *Trifecta* group remained urinary toxicity. Although our criteria for Trifecta were very strict, results of this series were comparable with previous prostatectomy studies.

14 h 25 - 14 h 34
Le stade de la tumeur sur la re-résection trans-urethral prédit la rechute et la progression du carcinome urothéthial superficiel de haut risque

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Introduction et objectifs : Actuellement, la prise en charge des patients avec un carcinome urothélial superficiel de haut risque est en débat afin de déterminer les avantages d'une procédure conservative, avec préservation de la vessie, plutôt qu'une cystectomie précoce. De nombreux efforts sont mis en place pour déterminer des facteurs pronostiques cliniques et biologiques utiles pour guider ce débat. Notre objectif était d'évaluer les variables cliniques, en termes d'indicateur de progression et récurrence, chez les patients avec carcinome urothélial superficiel de haut risque, qui suivent une résection trans-urétrale de re-staging (re-RTU).
Patients et méthodes : Les données cliniques de 348 patients avec carcinome urothélial superficiel, traités au centre hospitalier de l'Université de Montréal (division d'urologie) entre 2004 et 2012, ont été révisées. De ceux-ci 59 patients avec tumeur superficiel de haut risque, ayant subi un re-RTU et n'ayant pas été réévalués à un stade de la maladie avec envahissement du muscle, ont été inclus dans l'étude.
Résultats : Sur les re-RTU, 30 patients n'avaient pas de maladie résiduelle (pTo) alors que 29 en avaient. Des 30 patients avec pTo, 13 (43,3%) ont

eu une rechute de la maladie (temps médian de 13,3 mois) et 2 (6,6%) ont montré une progression de la maladie (temps médian 23 mois). Des 29 patients avec tumeur résiduelle sur la re-RTU, 23 (79.3%) ont eu une rechute (temps médian 5.4 mois) et 9 (31%) ont progressé (temps médian 11 mois). En analyses multivariées, le stade de la tumeur sur la re-RTU et le régiment de BCG (induction vs maintenance) étaient des facteurs indépendants de rechute (p=0.001 HR: 1.85, p<0.001 HR: 0.09, respectivement), alors que pour la progression, le stade de la re-RTU était le seul facteur pronostique indépendant (p=0.019 HR: 1.89).
Conclusions : La présence de pTo sur re-RTU est associée à un meilleur intervalle de progression et de rechute de la maladie. Les patients avec une persistance du cancer superficiel sur re-RTU nécessitent un proche suivi et pourraient être considéré dans certains cas pour une cystectomie précoce.

14 h 34 - 14 h 43
Relationship between stone type, stone culture and urine culture in patients undergoing percutaneous nephrolithotomy
Naeem Bhojani; James E. Lingeman; James C. Williams
Indiana University School of Medicine
Introduction: One of the most significant complications of percutaneous nephrolithotomy (PCNL) is sepsis. In order to avoid this complication, pre-operative urine cultures are used to adequately treat patients before performing PCNL. Moreover, patients who are known to harbor struvite stones are exceedingly scrutinized when preparing for PCNL. However, it has been shown that non-struvite stone formers may harbor equally lethal bacteria. As well, peri-operative stone cultures can harbor different bacteria than pre-operative urine cultures. The objective of this study is to demonstrate the relationship between stone type, stone culture and urine culture in order to unable one to adequately treat and/or prevent sepsis post-PCNL.
Methods: We performed a retrospective data analysis of percutaneous nephrolithotomy patients treated at one institution between 1999 and 2009. Inclusion criteria for this study comprised patients who had results for both stone and urine cultures as well as stone mineral content.
Results: The overall agreement between urine and stone culture occurred in 361 cases (72.7%) and the rate of discordance was similar in both the struvite and non-struvite stone forming groups (26.2% and 27.4% respectively) (Table 1). A positive stone culture in the presence of sterile urine occurred in 10.5% of patients overall and this occurred most frequently in non-struvite stone formers (n=47, 10.8%). Of patients presenting with both a positive urine and stone culture (n=151), 67 or 44.4% (13.5% overall) were found to have different infectious organisms between the urine and the stone cultures. Therefore, 24% of patients will present with a positive stone culture in the presence of sterile urine (10.5%) or a different organism cultured from stone than from urine (13.5%).
Conclusion: The simplification of the infection stone being synonymous with struvite stone may have negative consequences in the clinical treatment and management of stone disease. As well, the utilization of urine cultures alone will often lead to misidentification of the actual infectious organism present in the kidney. Therefore, it is our belief that both the urine culture, as well as the stone culture, are useful in identifying and managing infectious risk associated with PCNL.

Session scientifique V

Objectifs éducatifs : À la fin de cette session, les participants seront en mesure de :
1. Comprendre les différentes étapes de la neuromodulation des racines sacrées.
2. Connaître l'évaluation et les indications cliniques de cette modalité de traitement.
3. Avoir une connaissance sur les données cliniques récentes de la neuromodulation sacrée afin d'améliorer la prise en charge éfficace de ces différentes dysfonctions mictionnelles complexes..

15 h 30 - 16 h 00
La neuromodulation sacrée: Où en sommes-nous ?
Conférenciere : Le Mai Tu
Modérateur : Martine Jolivet

Session scientifique VI
Objectifs éducatifs : À la fin de cette session, les participants connaîtront mieux les nouveautés dans la vessie hyperactive, les nouvelles lignes directrices de diagnostic, d'investigations et de traitements. Ils pourront ainsi prendre en charge les patients atteints de cette entite en sachant bien utiliser les astuces et les stratagèmes des derniers algorithmes disponibles.

16 h 15-17 h 00
Quoi de neuf au niveau de la vessie hyperactive
Conférencier : Francois Haab
Hopital Tenon Paris, France
Modérateur : Martine Jolivet

Table 1. Culture results of percutaneous nephrolithotomy patients grouped by stone mineral content

Stone mineral Content	Both negative (%)	Only positive urine culture (%)	Only positive stone culture (%)	Both urine and stone culture positive (%)	Total (%)
Struvite	9 (14.8)	11 (18.0)	5 (8.2)	36 (59.0)	61 (100)
Other	201(46.2)	72 (16.6)	47 (10.8)	115 (26.4)	435 (100)
Total	210 (42.3)	83 (16.7)	52 (10.5)	151 (30.4)	496 (100)