

UROLOGY IN JAMAICA





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OUTLINE



- - overview of postgrad training in JA/c'bbean
- - overview of urology services offered - numbers/skill of urologists, equipment
- - profile of patients (KP stats) - focus on stone burden
- - prostate cancer
- - ESRD/dialysis

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- Prior to 1970, all urology in Jamaica was done by general surgeons.
 - 1970- Professor Ludlow Lawson-Douglas was appointed Chief Consultant urologist at the Kingston Public Hospital (KPH)
 - 1973- Consultant Urologist at University Hospital of the West Indies(UHWI)

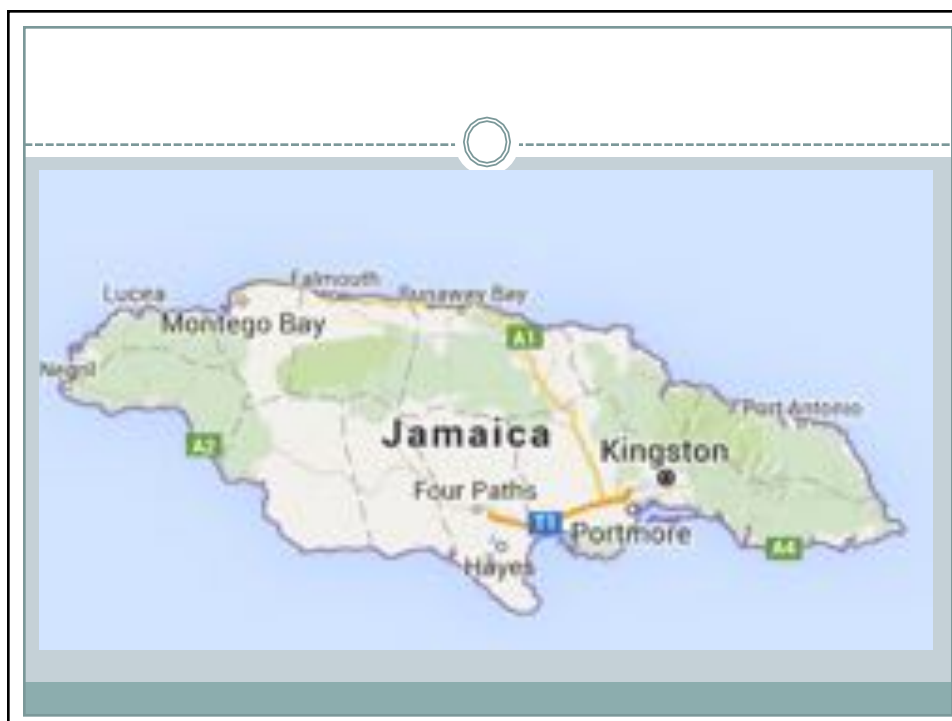
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- 1970-1994: urologists in Jamaica trained in the U.K. and in Canada
 - 1994- Doctor of Medicine in urology established at UHWI
 - First graduate- William Aiken in 1998
 - Since then- 13 persons have graduated from the D.M. program.

D.M. Program

- Two years rotating through the surgical specialties
- Then D.M. 1
- Pass- Hallelujah!!!
- Fail- change your career path!
- Then 5 years in urology. The penultimate year spent abroad.

Collaborations

- Prof Al Burnett- instrumental in us starting the AUA in-service exams
- Professor Chris Eden from the UK- laparoscopic radical prostatectomies at CRH



- Four Hospitals of the 16 public hospitals in Jamaica offer urological services.
- KPH and UHWI in Kingston
- Cornwall Regional Hospital in Montego Bay
- Mandeville Regional Hospital
- Health care is two-tiered: public and private

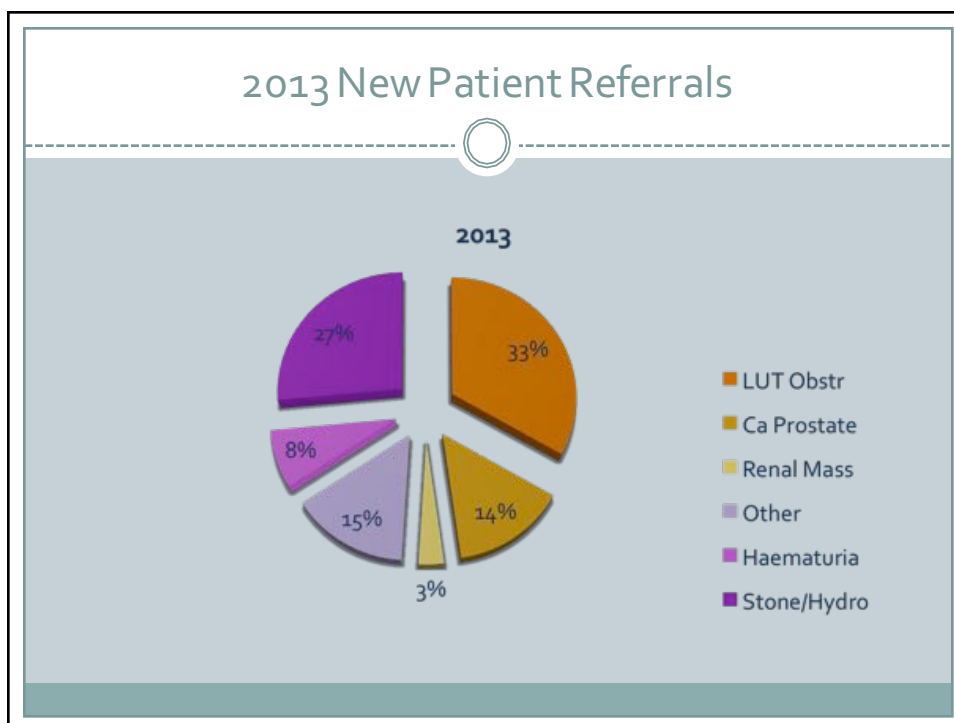
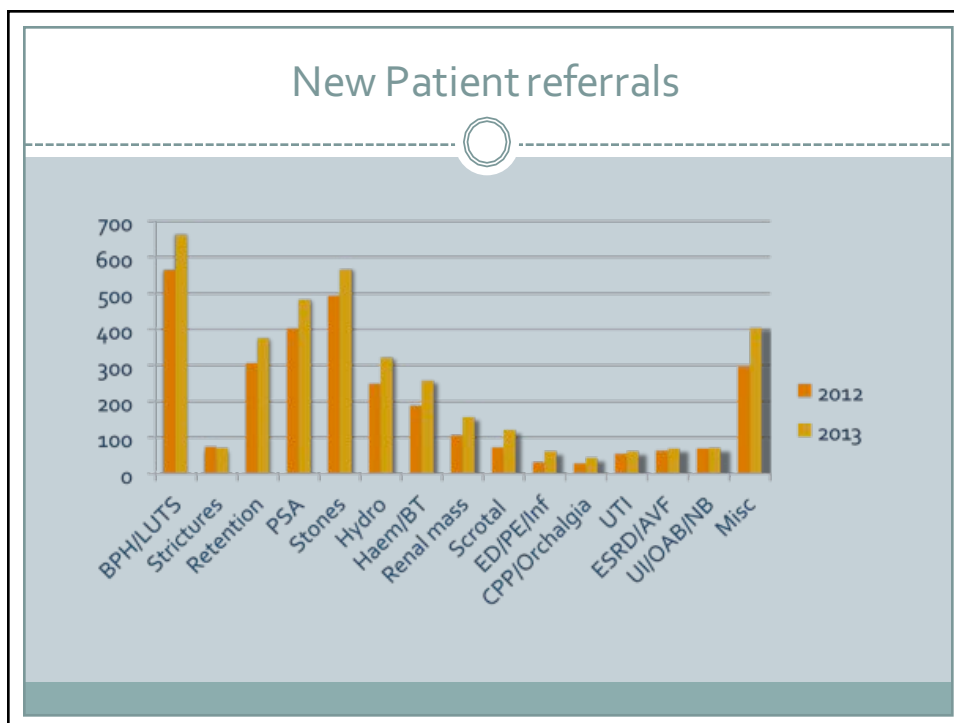
Services offered

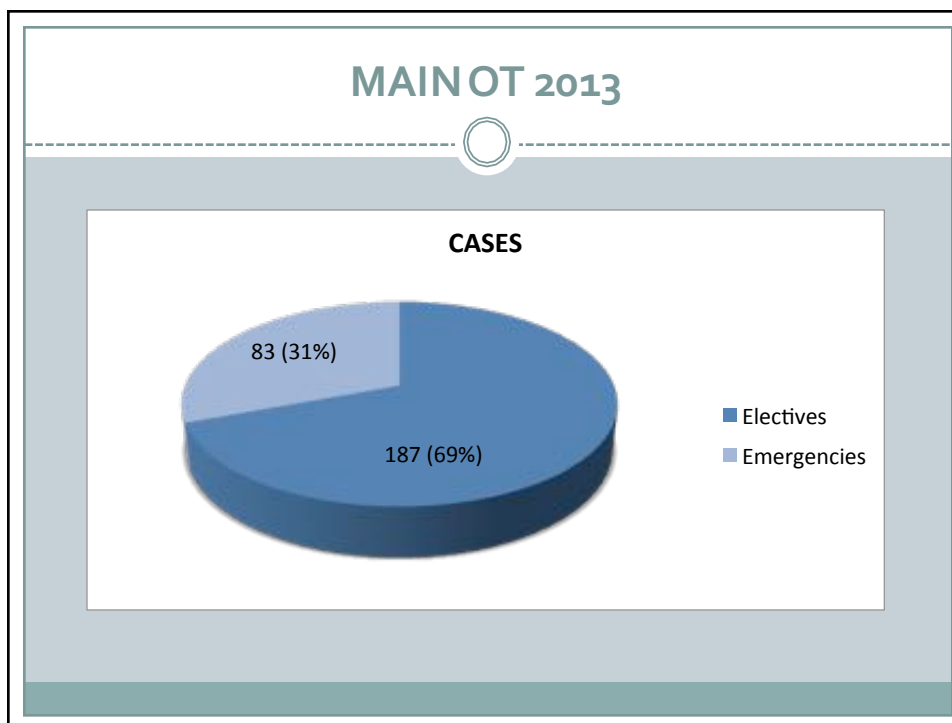
- **KPH**
 - 3 clinics
 - 5 operating days
- **UHWI**
 - 3 clinics
 - 2 operating days
- **CRH**
 - 2 Clinics
 - 2 Operating days

KPH: Urology Service

- Largest urology unit in Jamaica







Procedure	Year	
	2012	2013
RRP	8	13
Open Stone Surgery	64	60
PCNL	5	20
Ureteroscopy	5	40
TURP	33	75
Open Simple Prostatectomy	12	20
Simple Nephrectomy	9	16
Radical Nephrectomy	5	9
TURBT	46	32
Cystectomy	2	4
OIU/DVIU	43	59
Urethroplasty	7	14
Penile fracture	8	17

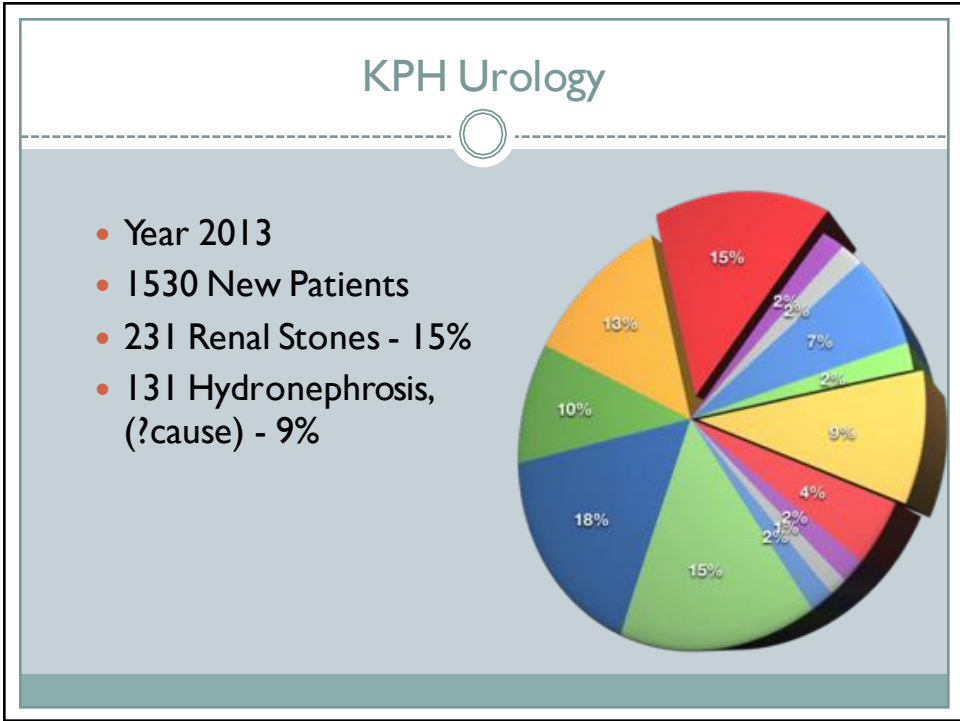
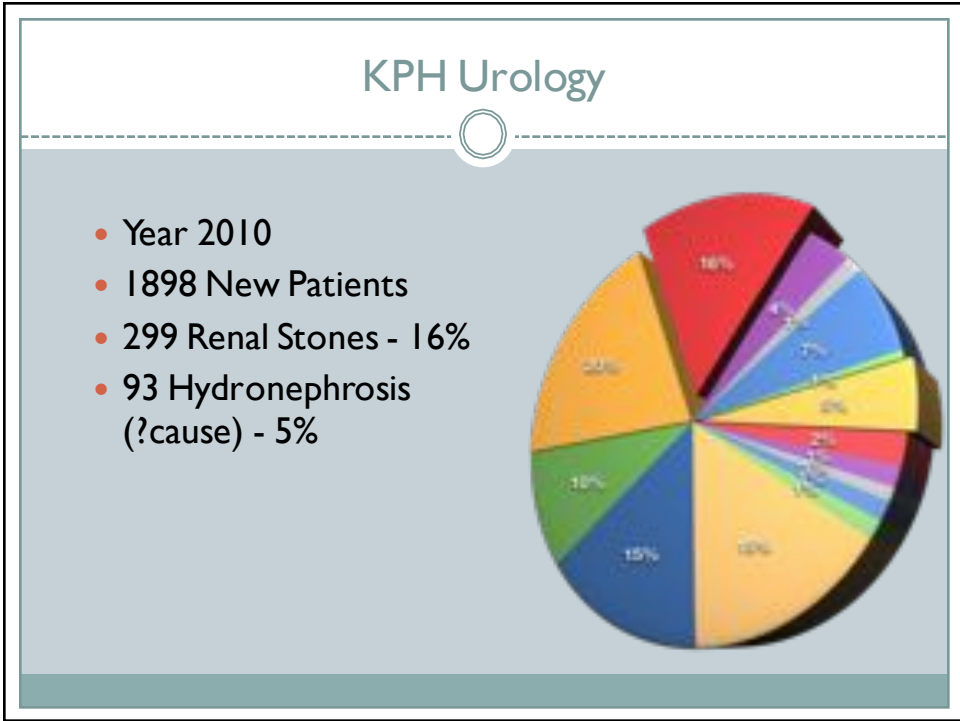
Stone Burden at KPH

- 3 fellowship trained endourologists in Jamaica
- 2 in Kingston, 1 in CRH

Disease Burden: Jamaica

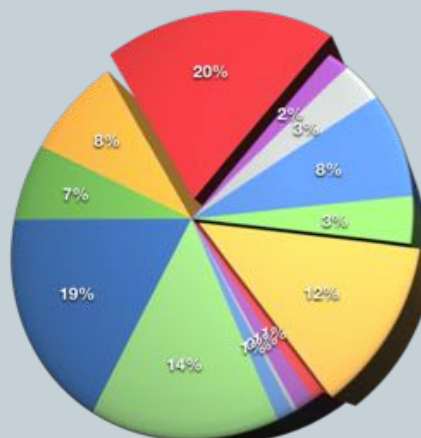
- Is there epidemiological data for RS in Jamaica?
- Do we see large numbers of RS patients?
- What data do we have?





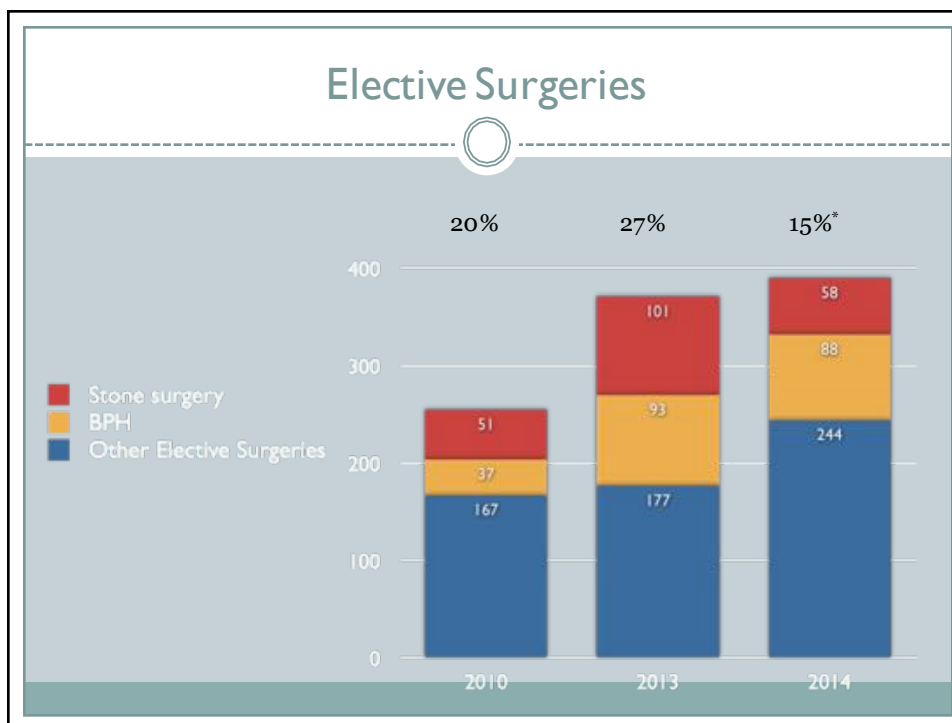
KPH Urology

- Year 2014
- 1640 New Patients
- 330 Renal Stones - 20%
- 192 Hydronephrosis, (?cause) - 11.7%



KPH Urology

- For the years assessed
- New patients with Renal Stones = BPH!
- 858 each

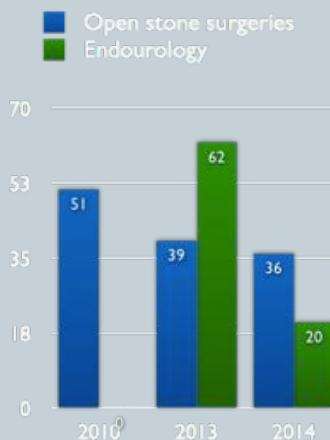


KPH RS Surgery: The Reality

- No ESWL
- No laser
- No Flexible URS
- limited disposables
- Old equipment

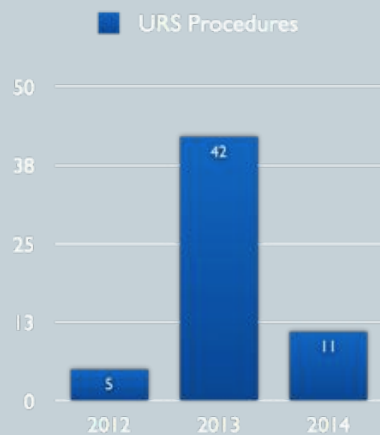
Open stone surgery: KPH

- Various open procedures are still being done
- Stone free rates for 2009-2011 were 53/77 (58.3%)
- Non-staghorn stones 14/23 (60.9%)



Ureteroscopy at KPH

- 58 Elective URS procedures between 2012 and 2014
- Details on stone burden not recorded
- All done with semi-rigid scope and pneumatic lithotripsy



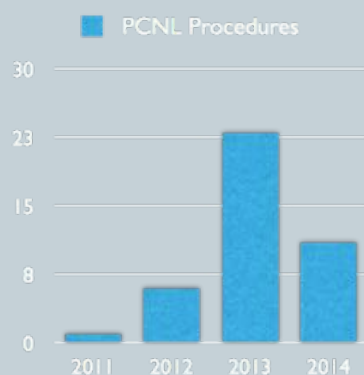
Ureteroscopy at KPH

- Stone free rate 48/58 (83%)
 - 1 equipment failure, 3 retropulsed stones
 - 2 failed basket retrievals, 4 unable to access stone
- CROES Ureteroscopy Global Study(77-94%)¹
 - 9864 ureteroscopies in 32 countries
 - Stone free rates: Distal (94%), Mid (89%), Proximal (85%), Multiple (77%)

1 - Perez Castro et al. Eur Urol. 2014; 66: 102

PCNL at KPH

- 41 PCNL procedures between 2011-2014
- Info available for 39
- Prone and supine



PCNL at KPH

- 12 staghorn stones
- 3 lower pole stones < 2cm
- All others > 2cm or multiple stones



PCNL at KPH Stone free?

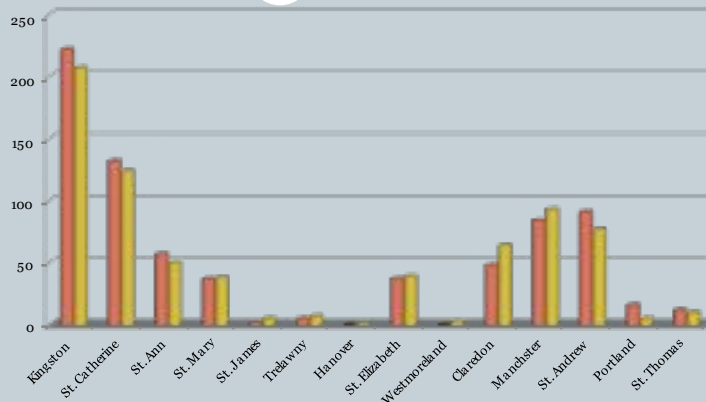
- PCNL procedures at KPH
 - 28/39 stone free - 72%
- CROES PCNL Global Study - 75.7%
 - 5803 procedures, 96 centres, 25 countries

1 - de La Rosette et al. J Endourolgy 2011; 25:102

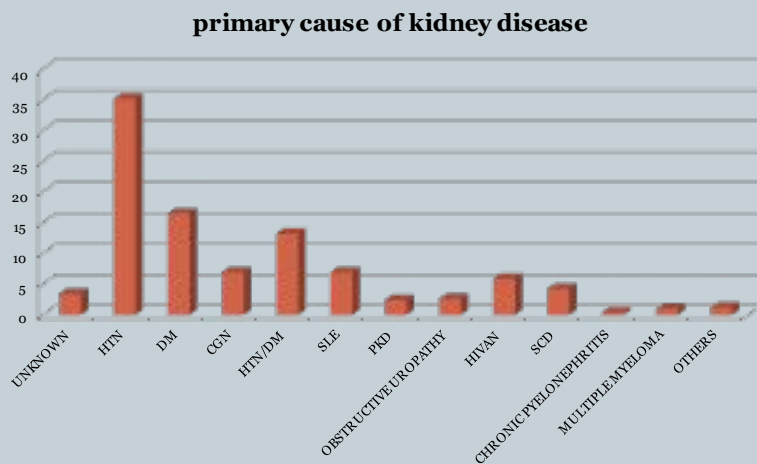
ESRD and RENAL REPLACEMENT THERAPY

- 500 new ESRD patients/year
- Last transplant at KPH 2011
- For vast majority dialysis (mainly HD) is the treatment for ESRD

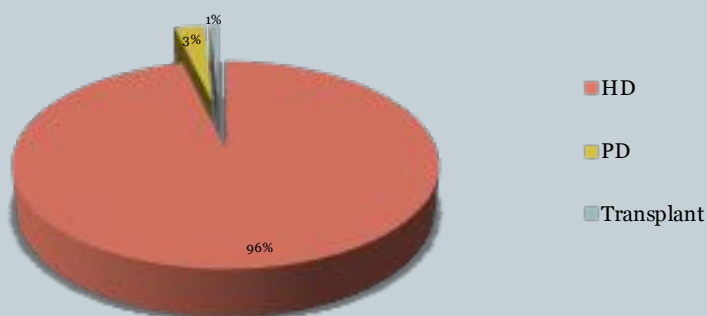
Distribution of CKD patients by Parish and gender2011 JRR



The major causes of CKD were hypertension (35.2%), diabetes mellitus (29.7%), CGN (6.9%) and SLE (6.9%) (CRR: 1007, Soyibo, Barton)



RRT Type in ESRD (N=625)

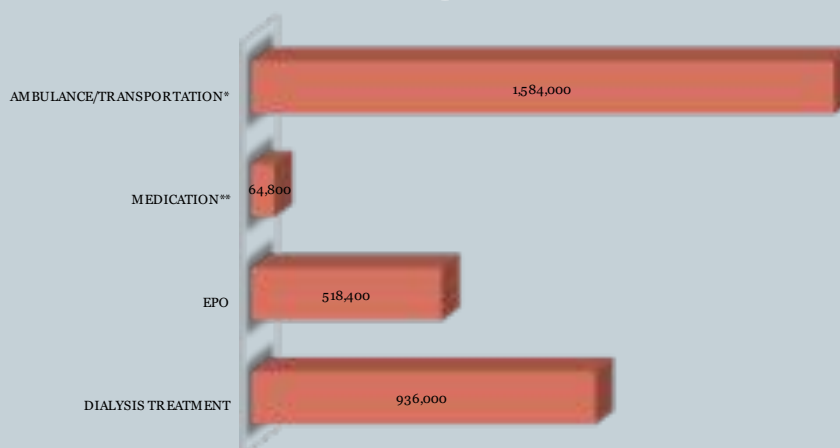


Economic Burden

Direct Costs

- Dialysis cost - \$6500.00 per session (90:1)
 - Erythropoietin - \$3500.00
 - Zemplar - \$1000.00
- Ideally three dialysis sessions per week
 - Majority of patients only receiving two sessions per week

AVERAGE COST FOR HEMODIALYSIS TREATMENT AT UHWI



Morbidity

- Majority of admissions secondary to dialysis catheter related reasons or infections
- Lower Respiratory Tract Infections
- Cardiovascular Related Pathology
- Cerebrovascular Accidents
- Other admissions related to comorbidities such as complications of diabetes

Psychosocial & Quality of Life

- Multiple international papers documenting a deleterious effect on Quality of life with patients with ESRD on Haemodialysis.
- At UHWI patients reported
 - Reductions in general health
 - Physical functioning
 - Physical role
 - Emotional Role

Gayle, F., Soyibo, A. K., Gilbert, D. T., Manzanares, J., & Barton, E. N. (2009). Quality of life in end stage renal disease: a multicentre comparative study. *West Indian Med J*, 58(3), 235-242.

Transplant in Jamaica - History

- First transplant in Jamaica September 1970
- 3 – 5 performed per year until 1993
- Over 100 performed in total
- Approximate 75% survival success rate with kidney functioning at 5 years

Douglas, L. L., Nicholson, G. D., Fletcher, P. R., & Morgan, A. G. (1981). Renal transplantation in Jamaica. *West Indian Med J*, 30(1), 39-42.

Transplant – Current Status

- 4 transplants performed over the last year
- Cornwall Regional Hospital
- Living Donor Laparoscopic Nephrectomy
- Patients doing well

Challenges to Transplantation

- Limited Donor Pools
 - Living Donors
 - Deceased Organ Donors
- Infrastructural Challenges
 - Availability of ICU beds to maintain potential “brain dead” deceased donors
 - Ability to fund a complete “on call” nationwide transplant team
 - Cost of HLA compatibility testing
 - Cost of Surgery
 - Cost of immunosuppressive drugs

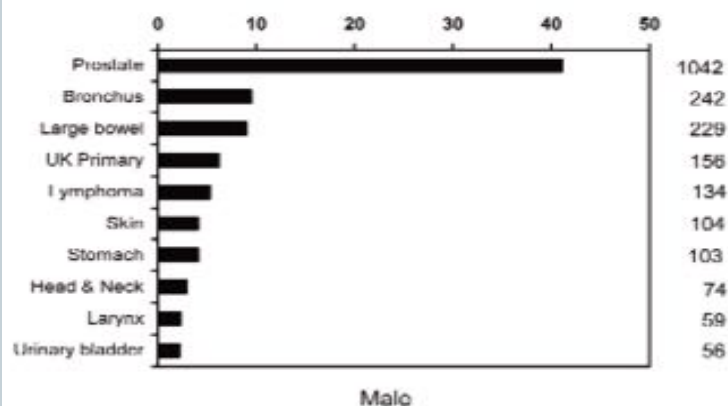
Urological Challenges to Transplantation

- # of Operating Lists per week
- On Average 3 cases per list
- UHWI - Current Waiting List in excess of 350 cases
- On Average 9 Cases added to waiting list per week.
- Will need dedicated renal transplant surgeons and operating time...

Prostate cancer

- Major ethnic group in Ja- afro- caribbean
- 91.2% of the population
- Prostate cancer accounts for almost 1/3 of all cancers diagnosed
- Gibson TN et al (2008) Age-specific incidence of cancer in Kingston and St. Andrew, Jamaica, 2003–2007 *West Indian Med J* 59(5) 456–64

Local Data 2003-2007



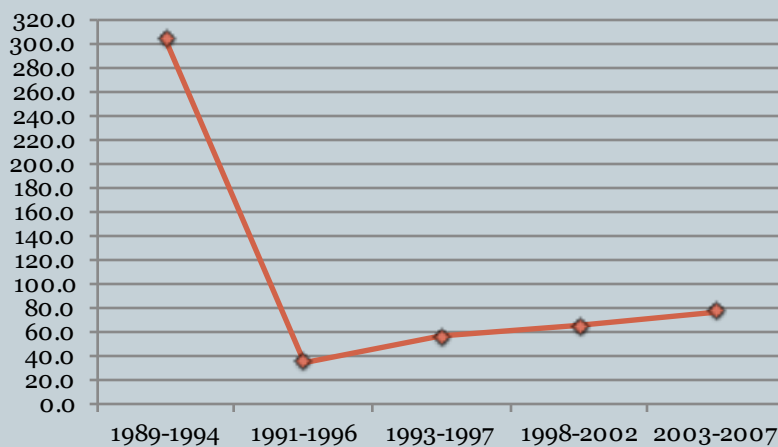
TN Gibson, B Hanchard, N Waugh, D McNaughton
West Indian Med J 2010; 59 (5): 456

- Age-standardised rate of 304/100,000
- Conclusion:
 - Jamaican men in Kingston had a high incidence of prostate cancer. Even higher than black -americans for that period.
- Glover FE, Jr et al (1998) The epidemiology of prostate cancer in Jamaica J Urol 159(6) 1984

- Age-standardized incidence- 78.1/100,000
 - Most common cancer in Jamaican men
 - (much less than Glover's report)
- Age-standardized mortality- 53.9/100,000
 - The most common cause of male cancer related deaths in Ja.
- Gibson TN et al (2008) Age-specific incidence of cancer in Kingston and St Andrew, Jamaica, 1998–2002 West Indian Med J 57(2)
- Blake G et al (2002) Jamaica cancer mortality statistics, 1999 West Indian Med J 51(2) 64–7

LOCAL DATA

Incidence rates



Local Data – Mortality Statistics


- Mortality 53.9/100,000 – one of the highest in the world
- USA – 22.3/100,000 (SEER database)
- UK- 23.1/100,000 (Cancer Research UK)
- Canada- similar to the USA(Canadian Cancer registry)

Blake G. et al: Jamaica cancer mortality statistics, 1999. WIMJ 2002 Jun;51(2):64-7.

- PSA testing available in Ja since 1989
- No formal national screening policy
- Most organised screening done by the Jamaica Cancer Society
- **Barriers to screening**
 - Fear of the DRE (Male gender of the examining physician)
 - Fear of diagnosis of a medical disease
 - Socioeconomic reasons
 - Fear of treatment related adverse side effects

Options for management

- **Active surveillance**
 - Practiced, but rarely. High risk population. Men not likely to adhere to follow-up protocol
- **Radical prostatectomy**
 - Commonly performed. Mostly done open. One urologist does laparoscopic RP
- **Morrison et al in 2011 reported on outcomes of RRP done at UHWI**
 - Biochemical survival free rate of 78.4%
- Morrison BF et al (2011) Radical prostatectomy outcomes at the University Hospital of the West Indies: 2000–2007 West Indian Med J 60(1) 68–72



Pathological outcome and biochemical recurrence-free survival after radical prostatectomy in African-American, Afro-Caribbean (Jamaican) and Caucasian-American men: an international comparison

Chad R. Ritch, Belinda F. Morrison*, Greg Hruby, Kathleen C. Coard*, Richard Mayhew*, William Aiken*, Mitchell C. Benson and James M. McKiernan

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- **Jamaican men presented at a slightly older age**
 - 61 vs 58 years
- **Higher PSA levels**
 - 8.8 vs 6.2 and 5 (p <0.05)
- **Gleason score**
 - 44% >7 vs 8% and 0% (<0.01)
- **Jamaican and AA men had worse pathological outcomes after RRP**
- **5 year biochemical free survival similar for Ja men and AA (76/74%) and was less than CA at 98%.**

- **Brachytherapy**

- Offered in the private system

- **EBRT**

- Available at 2 public hospitals, KPH and CRH
- Cobalt, used for other cancers across the island
- Privately- Varian Linear Accelerator available

- **ADT**

- Both surgical and chemical

- National Health Fund- government run. Subsidizes drug treatment and enables greater access

- Goserelin, leuprolide, bicalutamide, flutamide

- More recently abiraterone

Thank You!!

