Managing Cancer of the Cervix in a setting with significant resource constraints:

A KZN Experience

UNIVERSITY OF KWAZULU-NATAL

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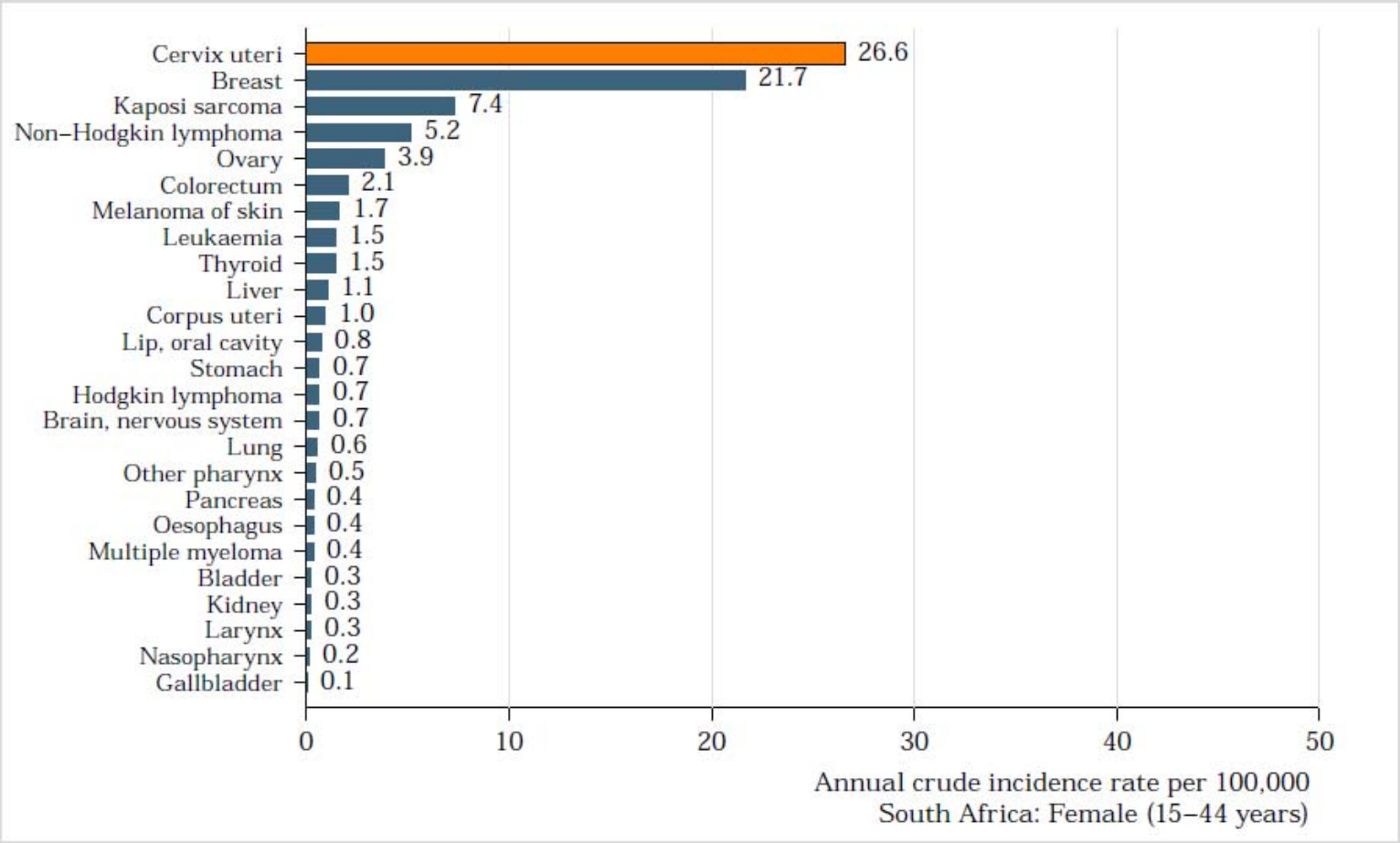
Gynae-oncology
Kwa-Zulu Natal

Age Specific Cancer Incidence Among Women 15-44 Years of Age (Estimations for 2012)



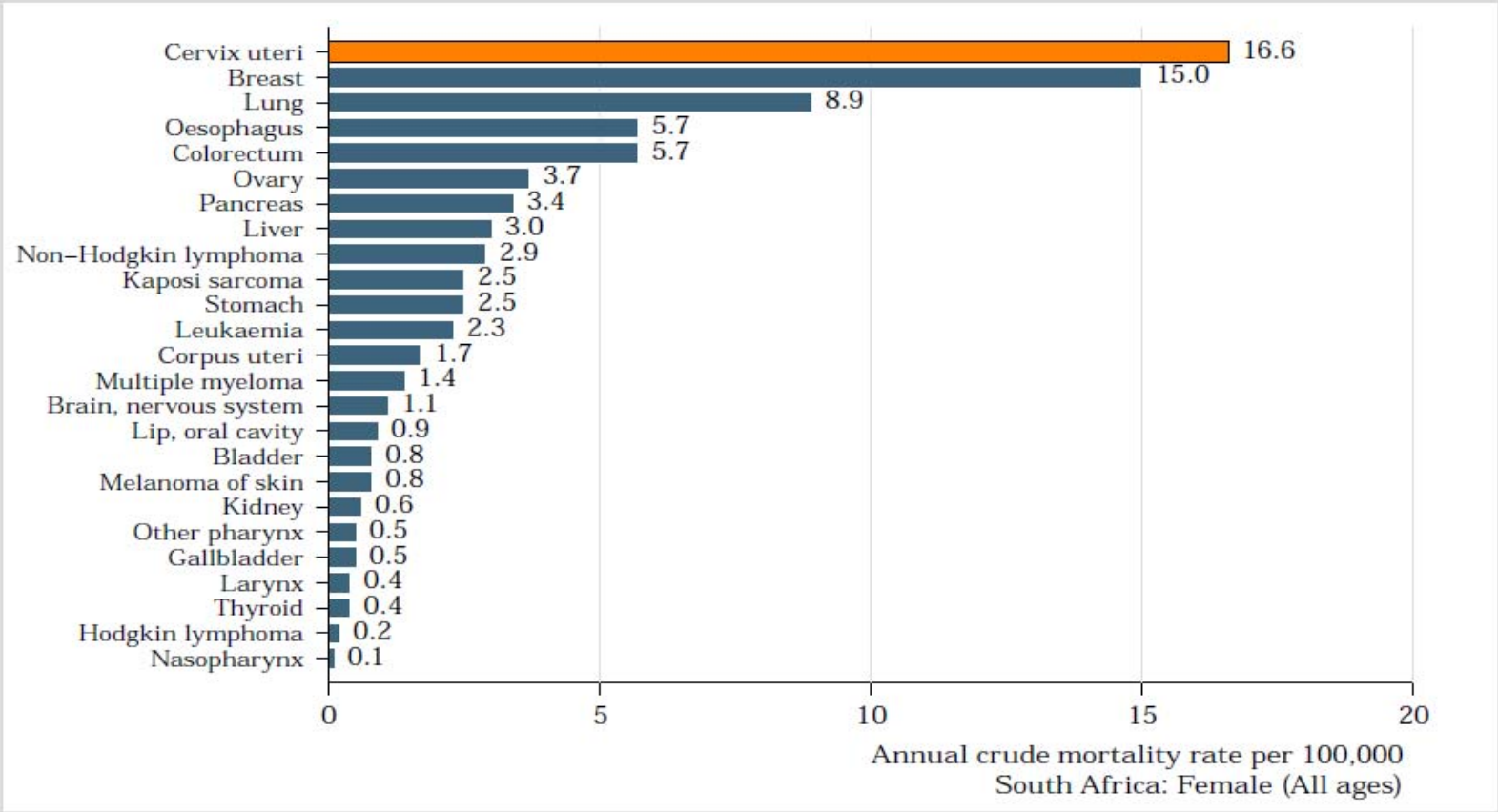
Cancer of the colorectum: Includes anal cancer (C21).
Kaposi Sarcoma: Includes B21.0 (HIV disease resulting in Kaposi sarcoma).
Non-Hodgkin lymphoma: Includes HIV disease resulting in malignant neoplasms (B21).

Data sources:

Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray F. GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer; 2013. Available from: http://globocan.iarc.fr, accessed on 15/01/2014.

For specific estimation methodology refer to http://globocan.iarc.fr/Pages/DataSource_and_methods.aspx

Cervical cancer mortality compared to other cancers in women of all ages in South Africa (estimations for 2012)



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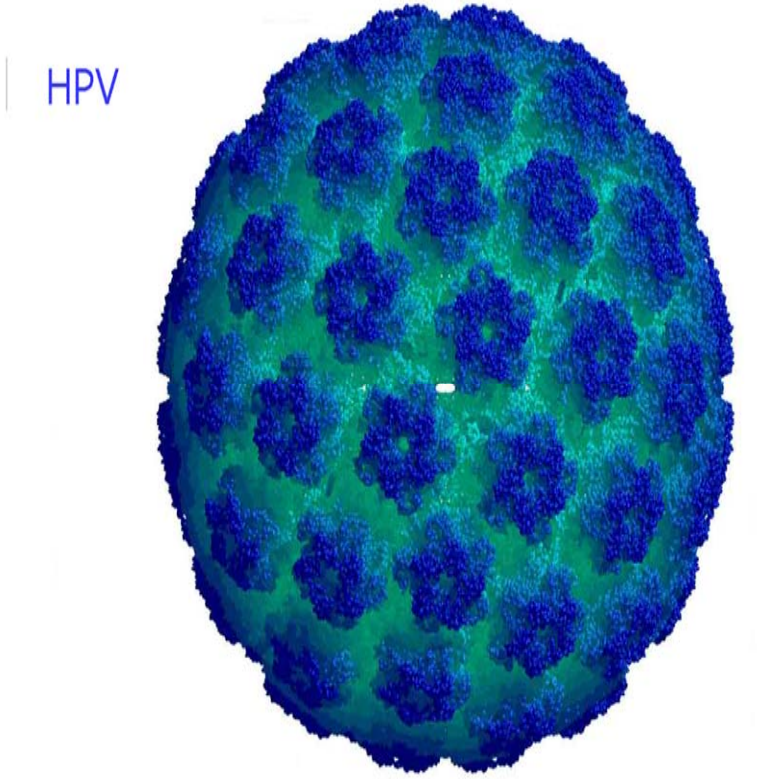
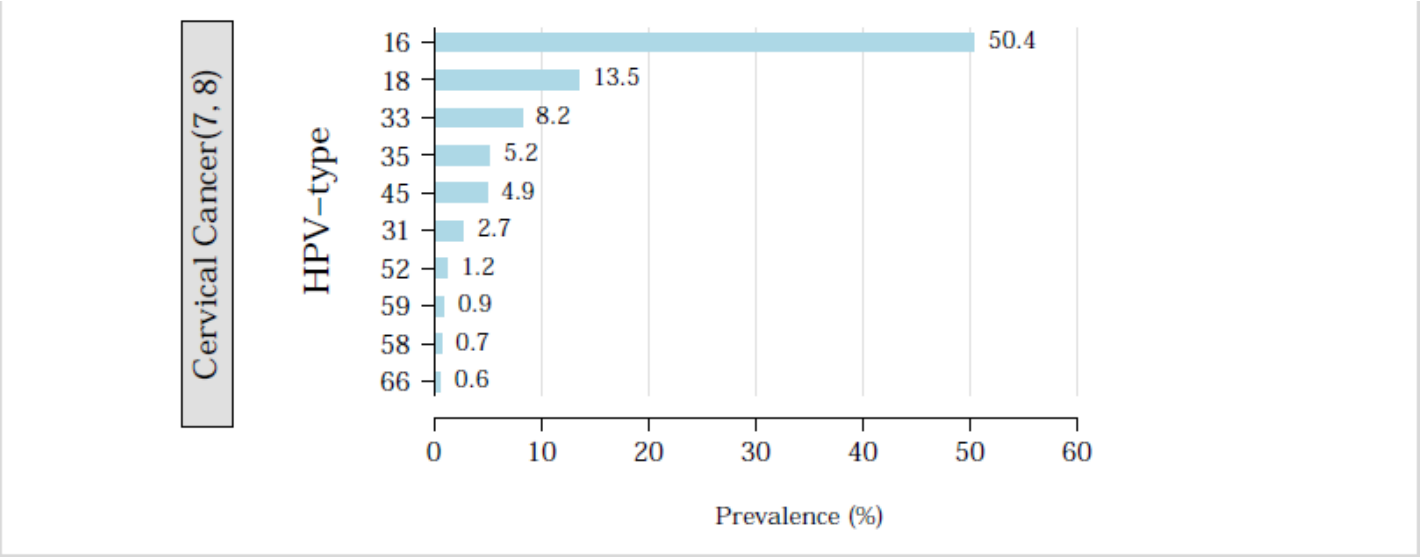
HPV



The ten most frequent oncogenic types among women with invasive cervical cancer in South Africa



Data updated at 13 Dec 2014 (data as of 30 Jun 2014 / 31 Oct 2014).

High-grade lesions: CIN-2, CIN-3, CIS or HSIL; Low-grade lesions: LSIL or CIN-1; The samples for HPV testing come from cervical specimens (fresh / fixed biopsies or exfoliated cells).

Data sources:

[1]Based on systematic reviews and meta-analysis performed by ICO. The ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Bruni L, J Infect Dis 2010; 202: 1789. 2) De Sanjosé S, Lancet Infect Dis 2007; 7: 453

[2]Allan B, J Clin Microbiol 2008; 46: 740 | Jones HE, J Clin Microbiol 2007; 45: 1679 | McDonald AC, PLoS ONE 2012; 7: e44332

[3]Based on meta-analysis performed by IARC's Infections and Cancer Epidemiology Group up to November 2011, the ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Guan P, Int J Cancer 2012;131:2349 2) Clifford GM, Cancer Epidemiol Biomarkers Prev 2005;14:1157

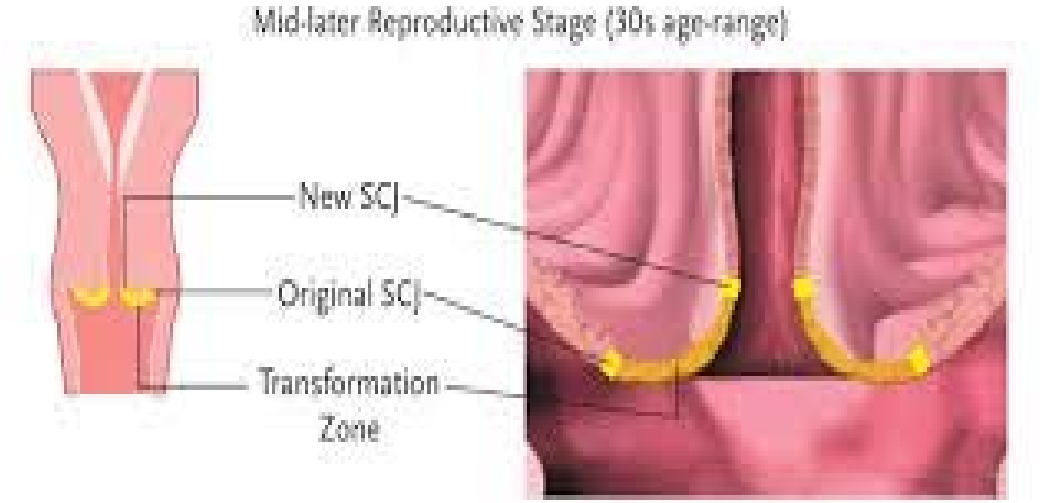
[4]Contributing studies: Allan B, J Clin Microbiol 2008; 46: 740 | McDonald AC, Front Oncol 2014; 4: 48

[5]Based on meta-analysis performed by IARC's Infections and Cancer Epidemiology Group up to November 2011, the ICO HPV Information Centre has updated data until June 2014. Reference publications: 1) Guan P, Int J Cancer 2012;131:2349 2) Smith JS, Int J Cancer 2007;121:621 3) Clifford GM, Br J Cancer 2003;89:101.

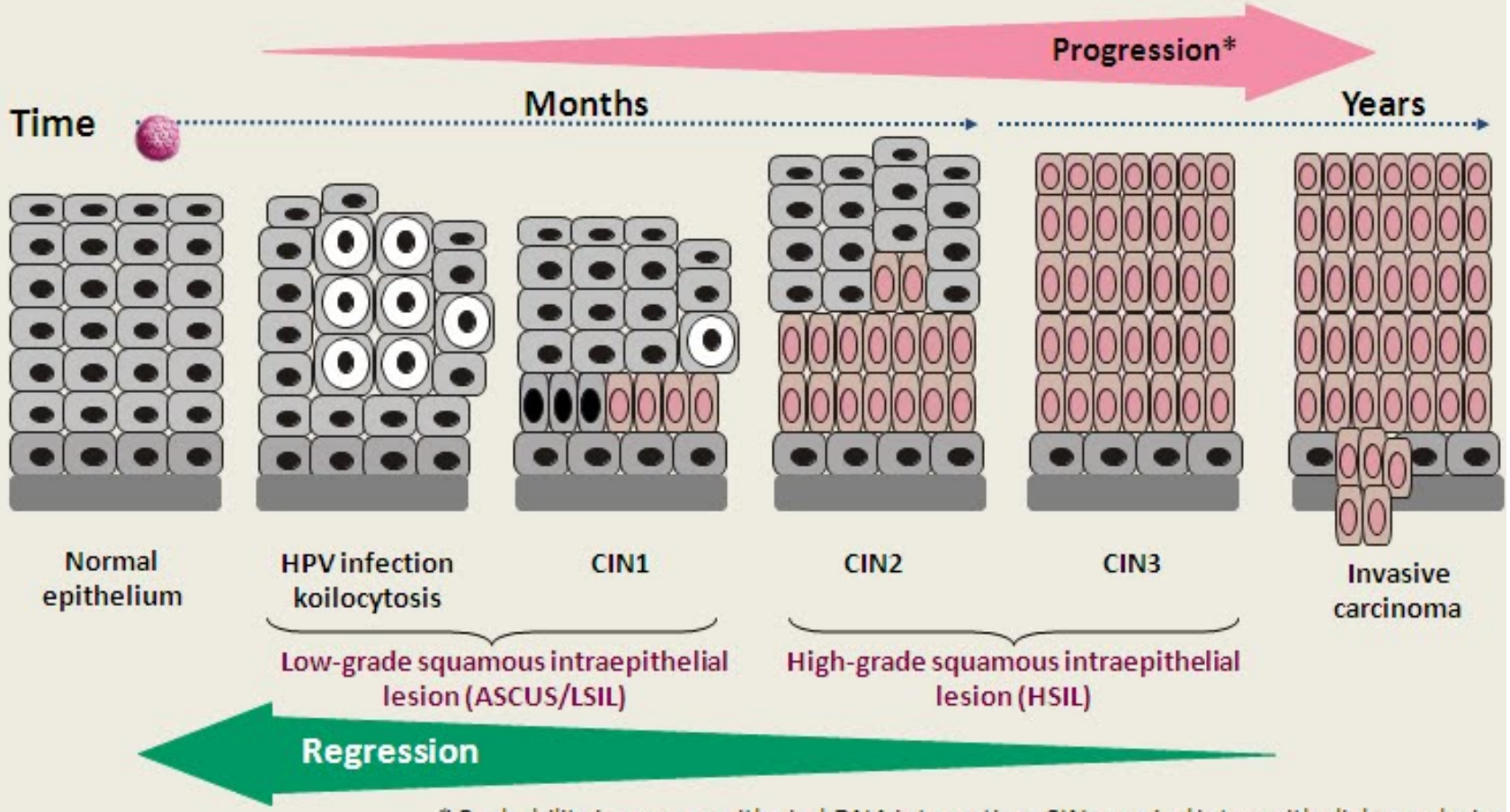
[6]Contributing studies: Allan B, J Clin Microbiol 2008; 46: 740 | De Vuyst H, Int J Cancer 2012; 131: 949 | McDonald AC, Front Oncol 2014; 4: 48 | Said HM, J Clin Virol 2009; 44: 318

Anatomy of the cervix

Figure 3. Cervical Squamocolumnar Junction (SCJ) and Transformation Zone

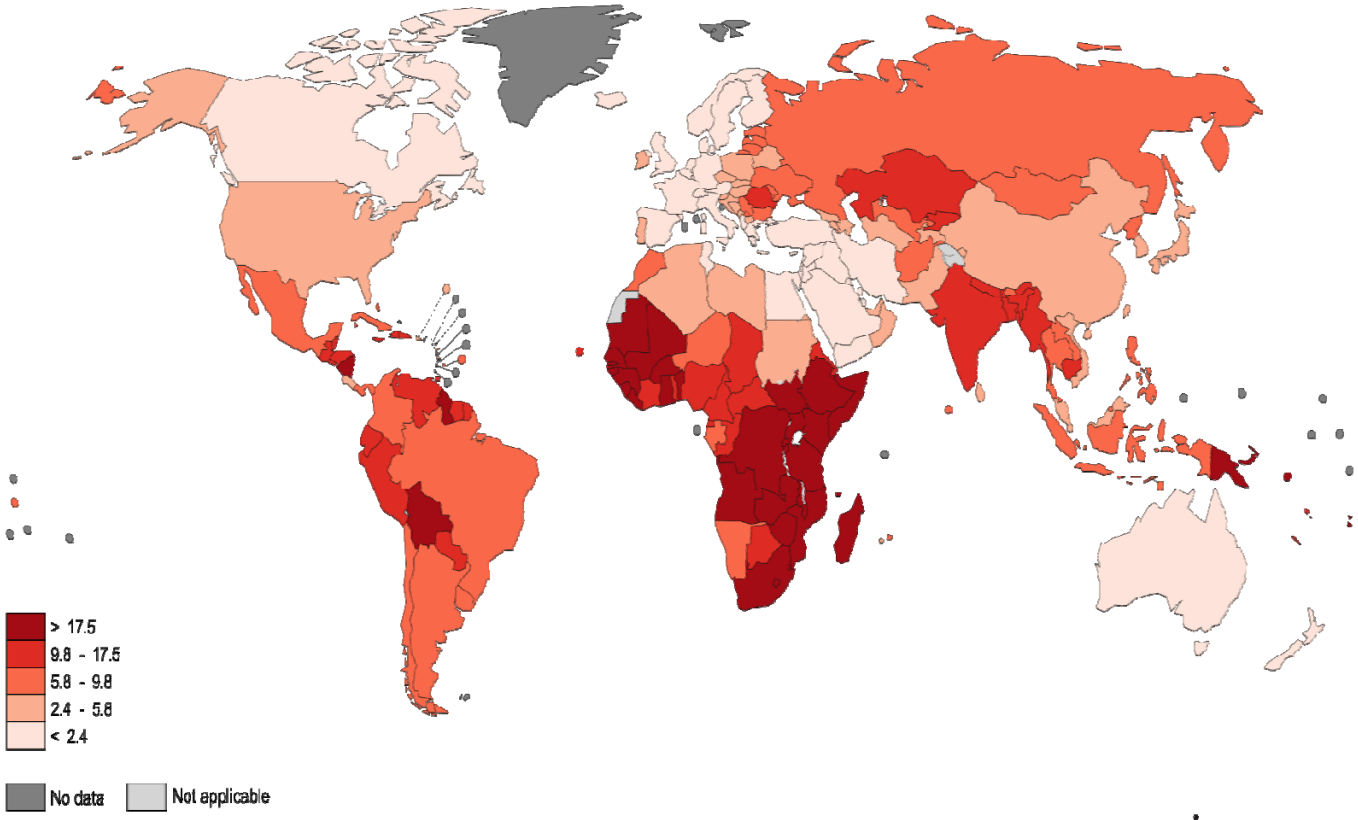


Progression of cervical disease after HPV infection



* Probability increases with viral DNA integration. CIN: cervical intraepithelial neoplasia; ASCUS: atypical squamous cells of undetermined significance

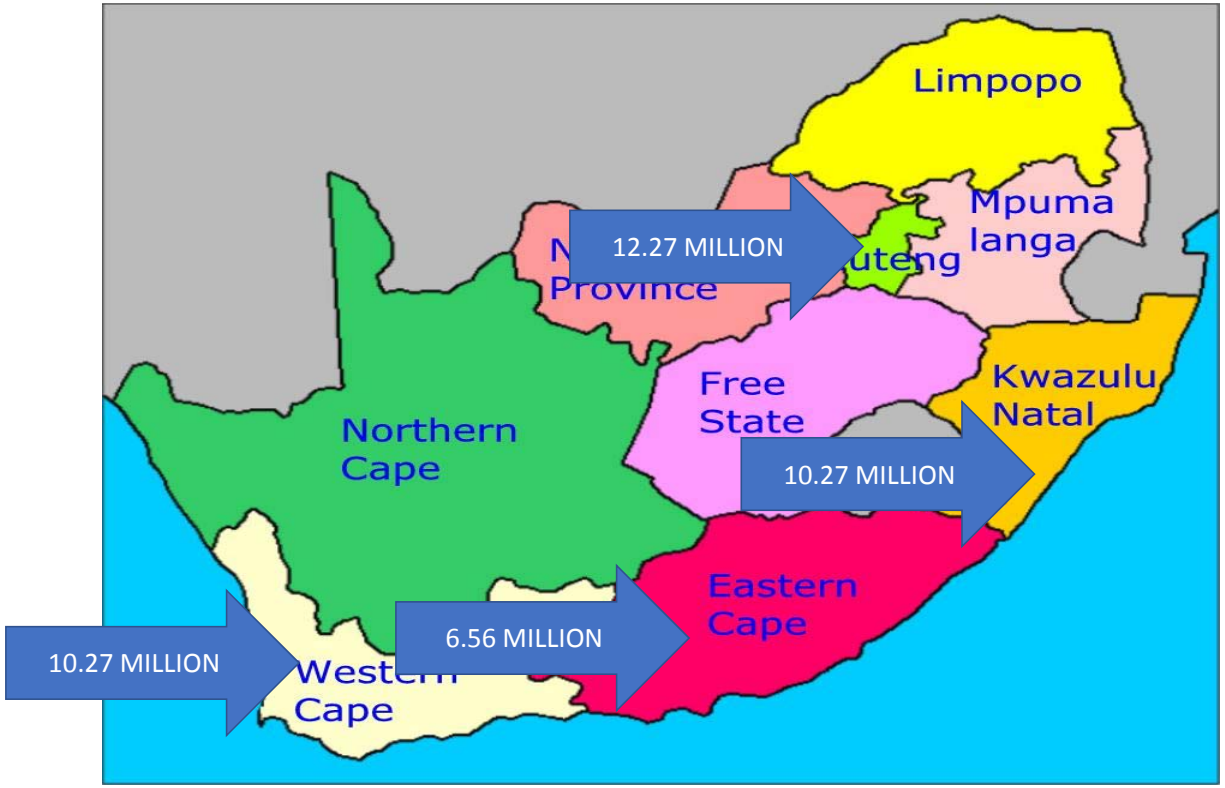
Burd EM. *Clin Microbiol Rev* 2003; **16**:1–17; Solomon D, *et al. JAMA* 2002; **287**:2114–2119.

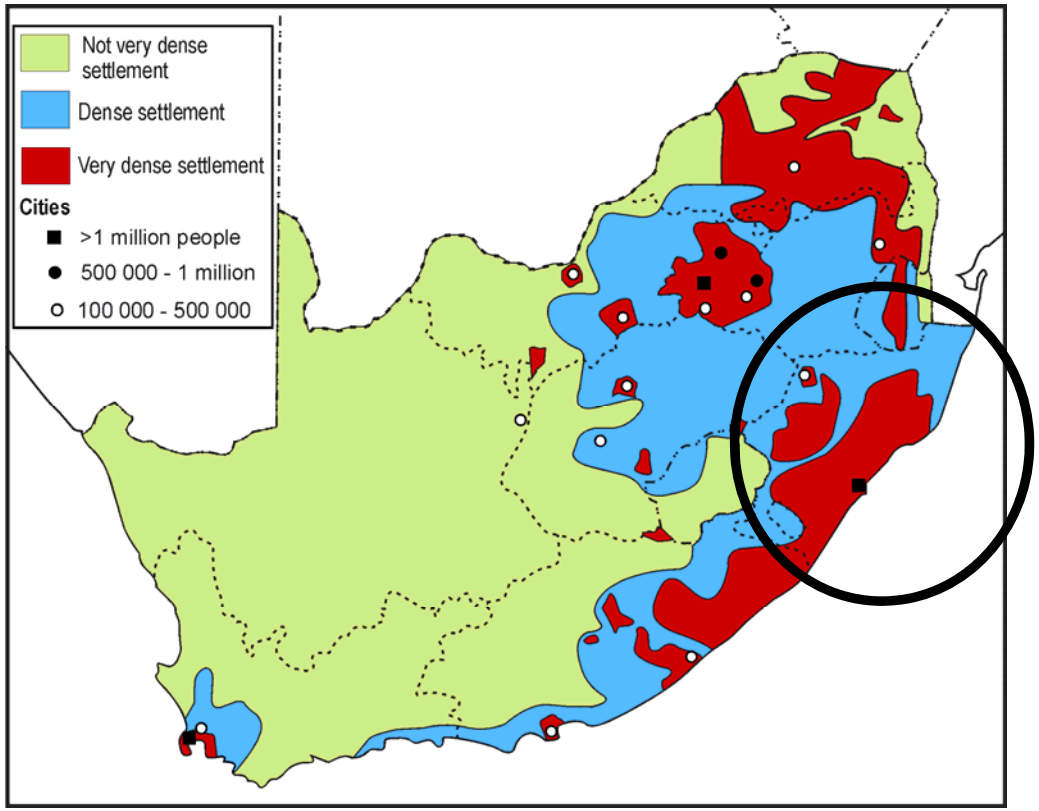


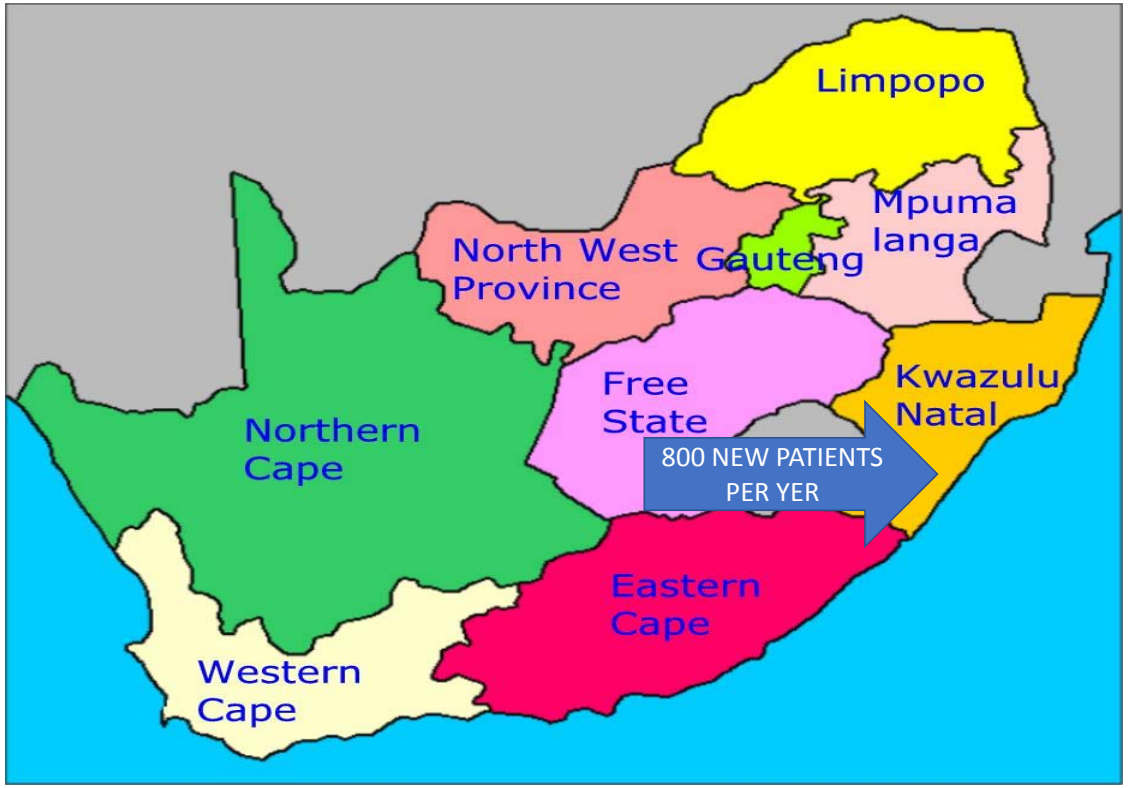
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data source: GLOBOCAN 2012
Map production: IARC
World Health Organization

World Health Organization


Limpopo
Mpuma
langa
12.27 MILLION
N
Province
uteng
Free
State
Kwazulu
Natal
Northern
Cape
10.27 MILLION
Eastern
Cape
6.56 MILLION
10.27 MILLION
Western
Cape


Not very dense settlement
Dense settlement
Very dense settlement
Cities
>1 million people
500 000 - 1 million
100 000 - 500 000


Limpopo
Mpuma
langa
North West
Province
Gauteng
Free
State
Kwazulu
Natal
Northern
Cape
800 NEW PATIENTS
PER YER
Eastern
Cape
Western
Cape

KZN – new cases of cervical cancer

2 CENTRES

1. IALCH / ADDINGTON HOSPITAL
   - +/- 500 PER YEAR

2. GREYS HOSPITAL
   - +/- 300 PER YEAR

- 800 NEW CASES

- EARLY DISEASE = 7%

SHORTFALLS

- Education and Primary Prevention
  - have not seen fruits of labour

- Screening program
  - No difference in mortality
  - No adequate database
  - No structured coverage program

- Diagnosis
  - Late presentation and diagnosis

- Staging
  - CT/MRI/PET scan now included in imaging for nodal assessment → not affordable
  - Primary assessment in theatre with cystoscopy and sigmoidoscopy is gold standard for clinical staging → not affordable

- Treatment
  - High volumes
  - Limited radiotherapy
  - Limited specialists

An efficient cervical cancer service

- Population = 5.23 million

- Complete HPV Vaccine program
- Screening Coverage: 98%
- Screening quality: 90%

- New cases = 4.4 – 4.8 per year

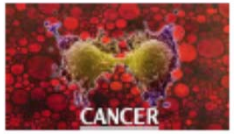
- Early cervical cancer = 63%

- Radiation machines = 38
  In 10 Radiation Centres

HealthMan

ADDING BUSINESS ACUMEN TO YOUR PROFESSIONAL EXPERTISE

NATIONAL CANCER CRISIS



mcc

MEDICINES CONTROL COUNCIL

Mail & Guardian, 27 June 2017

Cancer treatment in the public sector 'in crisis'?

CRISIS: Cansa says KZN lacks the necessary cancer equipment to treat patients. PICTURE: GETTY IMAGES

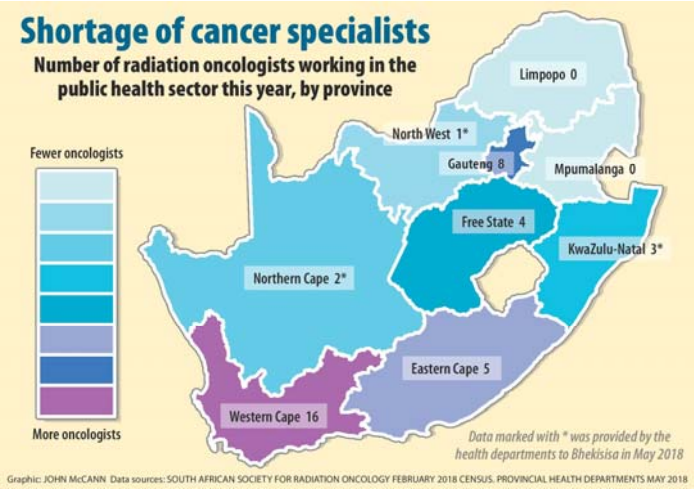
HOSPERSA

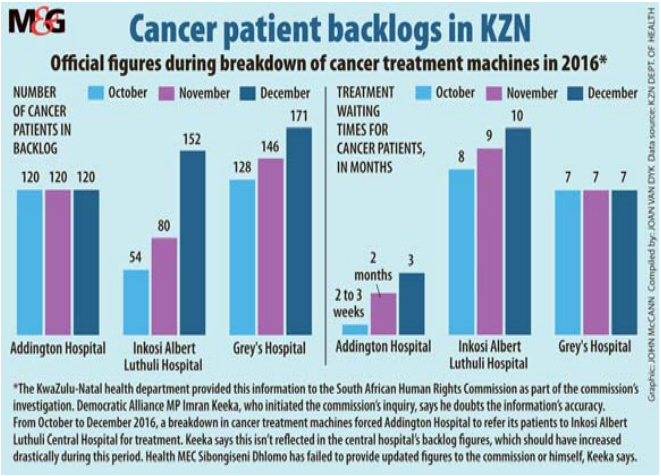
MEDIA RELEASE

HOSPERSA SLAMS KZN HEALTH FOR CANCER PATIENT DEATHS

24 March 2017

The Health and Other Service Personnel Trade Union of South Africa (Hospersa) is slamming the KwaZulu-Natal (KZN) Department of Health for failure to resolve the ongoing cancer treatment crisis in the province. The Union calls upon the Minister of Health, Dr Aaron Motsoaledi to urgently address what it calls a crisis in the KZN

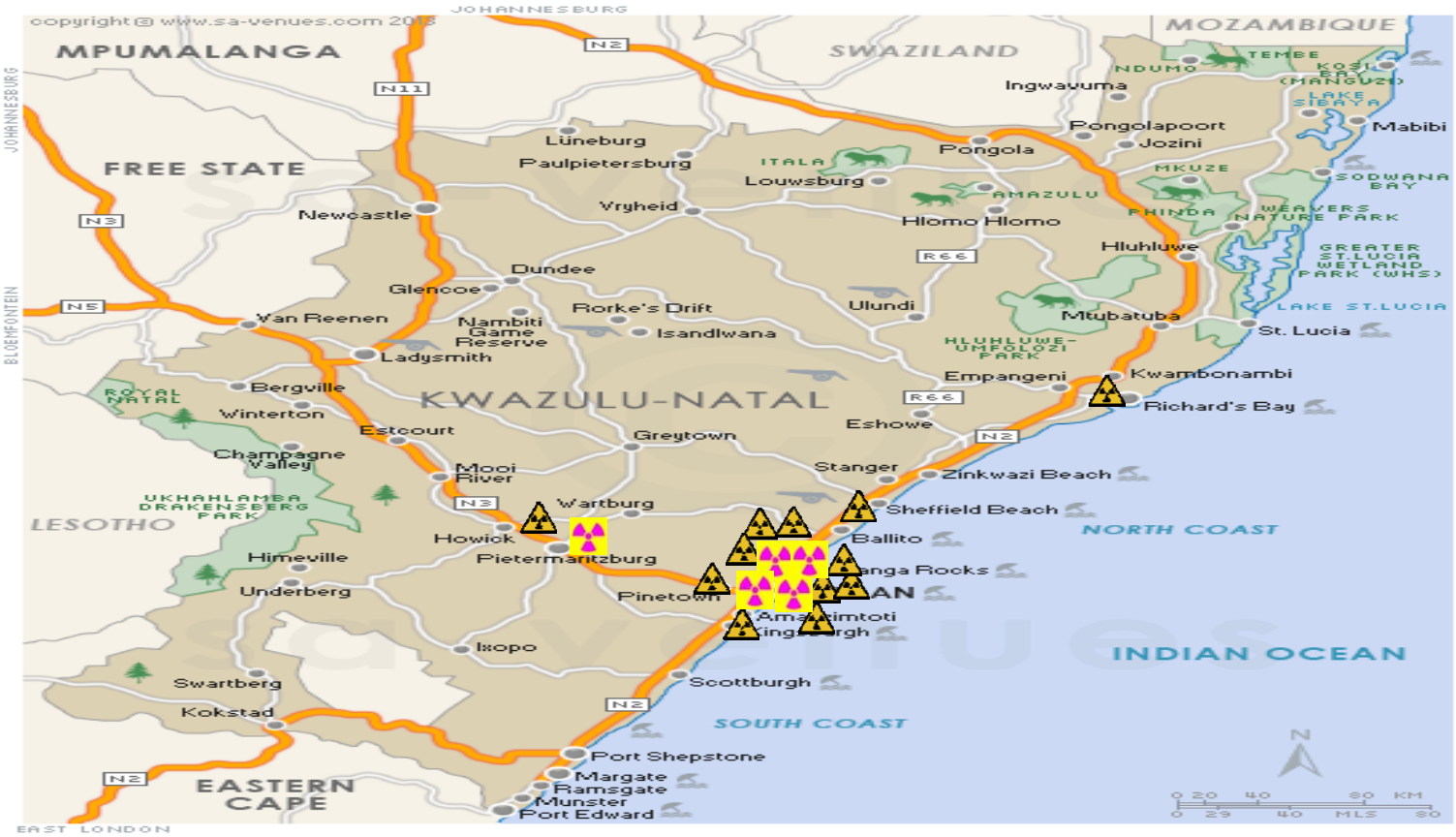

Shortage of cancer specialists
Number of radiation oncologists working in the public health sector this year, by province
Fewer oncologists
More oncologists
Limpopo 0
North West 1*
Gauteng 8
Mpumalanga 0
Free State 4
KwaZulu-Natal 3*
Northern Cape 2*
Eastern Cape 5
Western Cape 16
Data marked with * was provided by the health departments to Bhekisisa in May 2018
Graphic: JOHN McCANN Data sources: SOUTH AFRICAN SOCIETY FOR RADIATION ONCOLOGY FEBRUARY 2018 CENSUS. PROVINCIAL HEALTH DEPARTMENTS MAY 2018


M&G
Cancer patient backlogs in KZN
Official figures during breakdown of cancer treatment machines in 2016*
NUMBER OF CANCER PATIENTS IN BACKLOG
October November December
120 120 120
54 80 152
128 146 171
Addington Hospital
Inkosi Albert Luthuli Hospital
Grey's Hospital
TREATMENT WAITING TIMES FOR CANCER PATIENTS, IN MONTHS
October November December
2 to 3 weeks
2 months
3
8 9 10
7 7 7
Addington Hospital
Inkosi Albert Luthuli Hospital
Grey's Hospital
*The KwaZulu-Natal health department provided this information to the South African Human Rights Commission as part of the commission's investigation. Democratic Alliance MP Imran Keeka, who initiated the commission's inquiry, says he doubts the information's accuracy.
From October to December 2016, a breakdown in cancer treatment machines forced Addington Hospital to refer its patients to Inkosi Albert Luthuli Central Hospital for treatment. Keeka says this isn't reflected in the central hospital's backlog figures, which should have increased drastically during this period. Health MEC Sibongiseni Dhlomo has failed to provide updated figures to the commission or himself, Keeka says.
Graphic: JOHN McCANN Compiled by: JOAN VAN DYK Data source: KZN DEPT OF HEALTH

Resources as at 2017: IALCH/Addington

- Human:
  - No full time oncologists
  - 2 part time oncologists (private practice) → spend 2 hours in CGC
  - 8 radiotherapists (5 IALCH and 3 Addington)
  - 2 physicists
  - GYNAE-ONCOLOGY
    - 1 gynae-oncologist
    - 1 fellow (gynae-oncology)
    - 1 registrar (2 monthly rotations)
    - 0 medical officers
    - O part time specialists/medical officers

- Non-Human
  - 4 Radiation machines
  - 2 x ADH (1 not functioning, 1 not used due to administration issue)
  - 2 x IALCH (1 functioning and 1 partially functioning)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JOHANNESBURG
MPUMALANGA
SWAZILAND
MOZAMBIQUE
FREE STATE
KWAZULU-NATAL
LESOTHO
EASTERN CAPE
INDIAN OCEAN
NORTH COAST
SOUTH COAST
EAST LONDON
BLOEMFONTEIN
N2
N11
N3
N5
R66
Ingwavuma
Pongolapoort
Jozini
Pongola
Mabibi
Lüneburg
Paulpietersburg
Louwsburg
Vryheid
Newcastle
Hlomo Hlomo
Hluhluwe
Dundee
Glencoe
Rorke's Drift
Ulundi
Mtubatuba
St. Lucia
Van Reenen
Nambiti Game Reserve
Isandlwana
Ladysmith
Empangeni
Kwambonambi
Richard's Bay
Bergville
Winterton
Estcourt
Greytown
Eshowe
Champagne Valley
Mooi River
Stanger
Zinkwazi Beach
Wartburg
Sheffield Beach
Howick
Ballito
Pietermaritzburg
Himeville
Underberg
Pinetown
Ikopo
Scottburgh
Swartberg
Kokstad
Port Shepstone
Margate
Ramsgate
Munster
Port Edward
NDUMO
TEMBE
KOSI BAY (MANGUZI)
LAKE SIBAYA
ITALA
MKUZE
SODWANA BAY
AMAZULU
PHINDA
WEAVERS NATURE PARK
GREATER ST.LUCIA WETLAND PARK (WHS)
LAKE ST.LUCIA
HLUHLUWE-UMFOLOZI PARK
ROYAL NATAL
UKHAHLAMBA DRAKENSBERG PARK
N
0 20 40 80 KM
0 25 40 MLS 80

PREVIOUS PRACTICE AT CGC (BEFORE 2011)

ALL NEW PATIENTS WITH GYNAE CANCER
NO. PER WEEK UNKNOWN
(WAITING TIME FOR FIRST VISIT +/-3 MONTHS)

ALL NEW PATIENTS
20 NEW PATIENTS (10 NEW CA CERVIX)

RADIATION WAITING TIME = 2 MONTHS + 3 MONTHS
INPATIENT CHEMO WAITING TIME = 2 MONTHS + 2 WEEKS
SURGERY WAITING TIME = 2 MONTHS + 1 MONTH

CGC: AFTER CHALLENGES SET IN (2011 – 2014)

ALL NEW PATIENTS WITH GYNAE CANCER
NO. PER WEEK UNKNOWN
(WAITING TIME FOR FIRST VISIT +/- 4 MONTHS)

ALL NEW PATIENTS
20 NEW PATIENTS (10 CA CERVIX)

RADIATION WAITING TIME = 4 MONTHS + 3 MONTHS
INPATIENT CHEMO WAITING TIME = 4 MONTHS + 1 MONTH
SURGERY WAITING TIME = 4 MONTHS + 2 MONTH

CGC: ATTEMPT TO ALLEVIATE WAITING TIME (2015 -2016)

ONLY CA CERVIX STAGE 2B UPWARDS → WAITING TIME = 2 MONTHS

PATIENTS SEEN AND MANAGED BY GYNAE ONCO TEAM FIRST → WT = 2 WEEKS + INTERVENTION + 2 WEEKS

MOLAR PREGNANCIES COMPLETELY NOT SEEN → WT <1 WEEK

20 NEW PATIENTS (10 CA CERVIX)

RADIATION WAITING TIME = 2 MONTHS + 9 MONTHS

INPATIENT CHEMO WAITING TIME = 2 WEEKS +/- INTERVENTION + 2 WEEKS

SURGERY WAITING TIME = 2 WEEKS + 2 WEEKS

CGC: 2017

ONLY CA CERVIX STAGE 2B UPWARDS → WT = 10 MONTHS

PATIENTS SEEN AND MANAGED BY GYNAE ONCO TEAM FIRST → WT = 3 MONTHS + INTERVENTION + 4 MONTHS

MOLAR PREGNANCIES SEEN → WT < 1 WEEK

5 NEW PATIENTS (5 CA CERVIX)

RADIATION WAITING TIME = 10 MONTHS + 11 MONTHS

INPATIENT CHEMO WAITING TIME = 2 WEEKS +/- INTERVENTION + 4 MONTHS

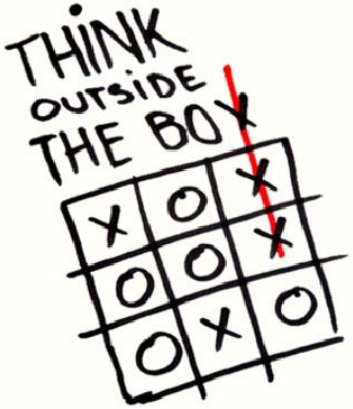
SURGERY WAITING TIME = URGENT: 3 WEEKS + 3 WEEKS (ASSESSED IN WARD)

NON-URGENT: 3 MONTHS + 1 MONTH

SOUTH AFRICAN HUMAN RIGHTS COMMISSION REPORT

Complaint File Ref. No.: KZ/1516/0451


Well, back to the old drawing board.
cordell
CARTOONSTOCK .com
Search ID: tcrn865


THINK OUTSIDE THE BOX

Measures attempted

1. Assessing and improving prevention strategies
   - Coverage
   - Quality of screening
   - Efficacy of screening
   - Population awareness

2. Chemotherapy measures
   Holding chemotherapy
   NACT
   Post treatment chemotherapy

3. Surgical measures
   - Radical Surgery

Prevention/Screening

- Audit of Pap smears → only 40-50% satisfactory for analysis

- Introduced LBC in 2017
  - All known sites using it exclusively
  - Quality: 75 % adequate
    22% missing endocervical component
    3% not satisfactory for analysis

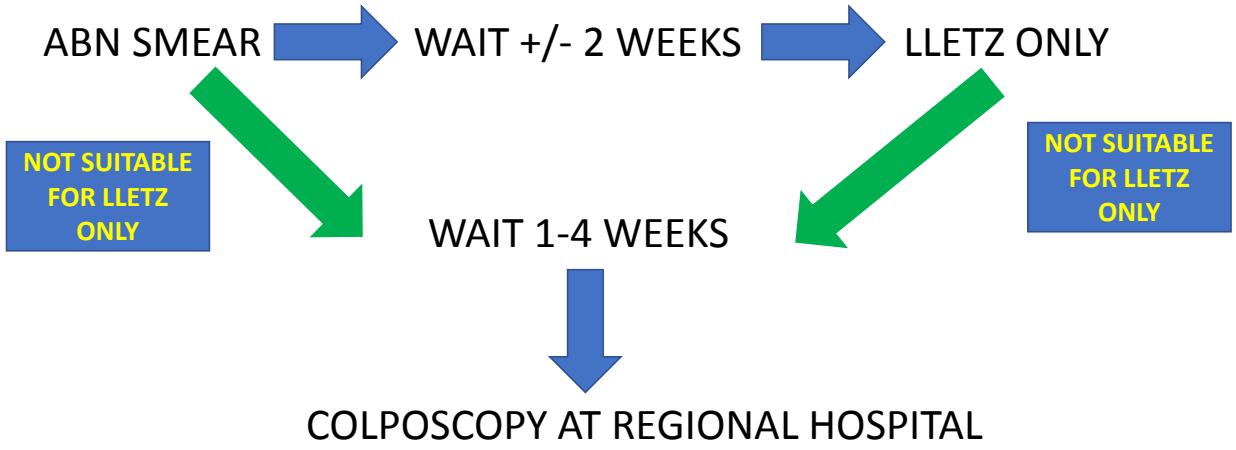
→ **97% satisfactory for analysis**

Building on this:

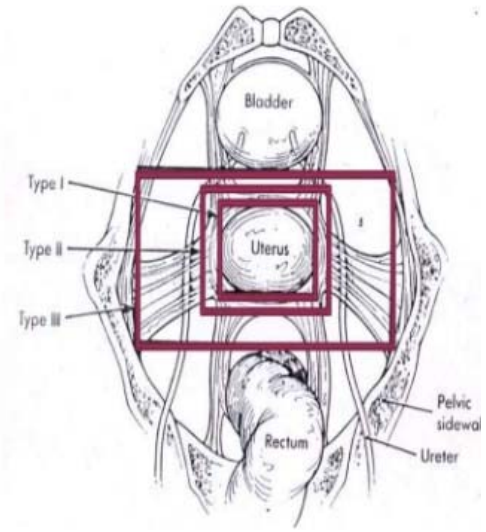
- Future Pap Drives:
  - Police force
  - Teachers Union
- Creating funding for “YES I HAD MY PAP” APP
- Ensuring all schools in KZN have vaccine available

Abnormal Smears

- LLETZ without Colposcopy → CONTROVERSIAL
- 15 LLETZ Machines purchased → distributed to key district level hospitals
- ABN SMEAR → WAIT +/- 6-12 MONTHS → COLPOSCOPY


ABN SMEAR
WAIT +/- 2 WEEKS
LLETZ ONLY
NOT SUITABLE FOR LLETZ ONLY
NOT SUITABLE FOR LLETZ ONLY
WAIT 1-4 WEEKS
COLPOSCOPY AT REGIONAL HOSPITAL

RADICAL SURGERY - Type 3b radical



RADICAL SURGERY - Type 3b radical hysterectomies

1. BULKY CA CERVIX (1B3 LESIONS)
   - Positive nodes
   - Positive parametria
   - Still required RT

2. EARLY STAGE 2 B
   - Some irresectable
   - High incidence of nodal involvement

CHEMOTHERAPY

1. BULKY CA CERVIX (1B3 LESIONS) → NACT followed by Type 3b radical hysterectomies
   - Positive nodes
   - Positive parametria
   - Still required RT

2. HOLDING CHEMO → whilst waiting for radiotherapy
   - Stopped this practice
     - Very poor response
     - Some patients became resistant to radiotherapy

3. Post surgical chemo to decrease recurrence
   - Waiting for results from the OUTBACK trial

NON CA CERVIX MEAS ECREASE WA

- URGENT OPERABLE: ASS URS: CHEMO IN
- URGENT CH STARTED IN LATE IN AM GOES OUT ONSTRAINTS)
- URGENT IMA ADMITTED TO RTS (RT NOT AN E DEBULKING OFFERRED
- ALL GTN: ADMITT
- PATIENTS FOR STAT

GYNAE-ONCO WARD COLLAPSE

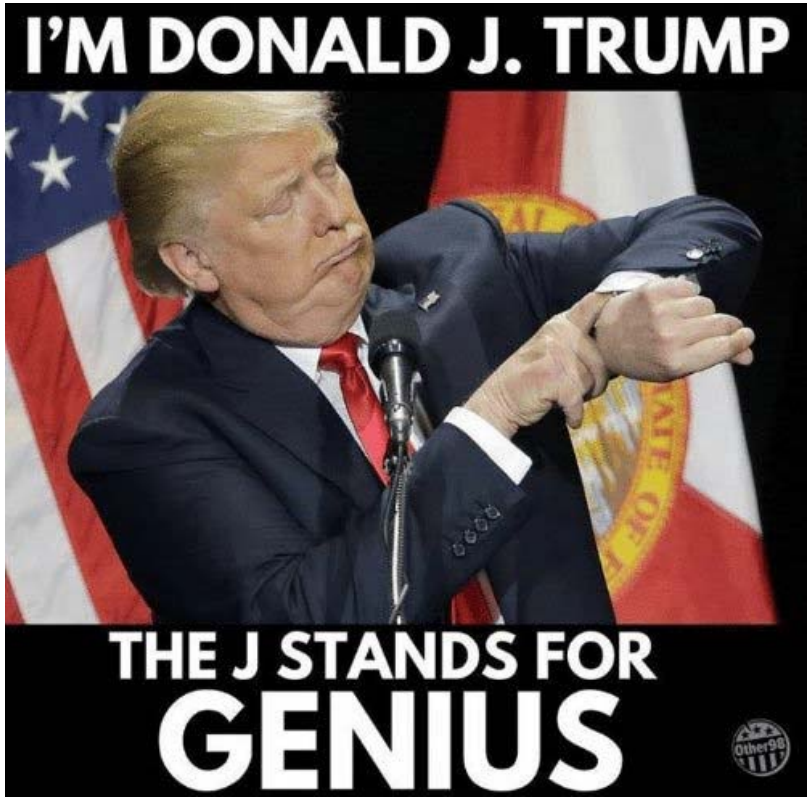
RESULTANT EFFECT

- WAITING TIME
- MORBIDITY AND MORTALITY TO PATIENTS
- MENTAL AND PHYSICAL FATIGUE OF TEAM MEMBERS
- SUB-OPTIMAL SUBSPECIALIST TRAINING (SERVICE DELIVERY SUPERCEDES)
- INFRINGEMENT ON BASIC HUMAN RIGHTS, PATIENT CARE AND PATIENT DIGNITY

Conclusion

- Not only a problem of low
- Cannot fix this p g holes
- We know res acquisition of radiation ma
- We need to u
  - the burden o
  - its geographica
  - the complete hun to treat patients
- Major effort needs to go into decreasing burden of disease in the form of prevention

NATIONAL CERVICAL CANCER TASK FORCE


I'M DONALD J. TRUMP
THE J STANDS FOR
GENIUS
Other98