

KESHO CONFERENCE 2016

DAY TWO: FRIDAY 25/11/16 9.42-11.20 am

Presentation 1: The Controversies in Prostate Cancer Screening By Dr. David Kimani

- Black Africans have a higher risk for prostate cancer. They also have more aggressive disease with poor outcomes due to late presentation.
- PSA test has been used for screening for prostate cancer for many years.
- Many doctors are now questioning the value of treating prostate cancer that has no symptoms due to the risk of complications.
- Screening= PSA + DRE
- Screening leads to early detection of prostate cancer and thereafter, treatment.
- Situation:
- In US, most men more than 50 years of age have had PSA tests despite the absence of benefit in literature. Experts have disagreed on its benefits
- In 2012, USPSTF issued a grade D recommendation which is a recommendation against screening for prostate cancer with PSA.
- Why the recommendation? Screening and subsequent treatment are often harmful. It leads to- low risk cancer treated very aggressively.
 - Inadequate treatment for high risk cancers.
 - Too much screening for elderly patients with a very short lifespan.

Studies have been done in the US(PLCO) and Europe(ERSPC) with the research question being: Does PSA screening reduce prostate cancer mortality? The results of the US study showed no benefits while the European study showed there is a benefit but at a high cost.

Various studies are still underway.

- False negative results: Normal PSA and DRE does not mean that there is no prostate cancer. In fact, there is a 26% chance of having cancer.
- False positive results: A high PSA does not necessarily mean that there is prostate cancer. Therefore, patients cannot be treated based on one PSA test and experts recommend a repeat PSA in 6-8 weeks.
- There is need to share information liberally with the patient to enable them make an informed decision.

Screening smarter

1. Screening based on age: See the **Memorial Sloan- Kettering Cancer Centre Guidelines of 2010.**
2. Use of new biomarkers: such as human kallikrein 2, the four kallikrein panel(PSA, fPSA, intact PSA, hk2)

Other markers – pro PSA panel

3. For patients with cancer, what do we do?

PIVOT study- Treatment vs observation

For those with low risk cancer, there is no difference if treated or not.

For those with high risk cancer, treatment is better.

Therefore risk stratification is key.

A problem arises though as to how agreeable active surveillance for low risk cancer is to the patient.

SUMMARY

- PSA screening detects cancers earlier.
- False positives are common.
- Overdiagnosis and overtreatment is a problem.
- Treatment- related side effects are fairly common.
- PSA should not be used as a screening test on its own, certainly not for mass screening.

Presentation 2 : Cervical Cancer Screening- Dr Ahmed Kalebi

(A paradigm shift to primary HPV Testing)

Cervical cancer is the only cancer whose screening changes mortality.

Historical milestones:

- 400BC- Hippocrates noted that cervical cancer was aggressive and lethal.
- 1925- Hinselman invented the colposcope
- 1928- Papanicolou developed the Papanicolou technique
- 1941- Papanicolou and Traut: Pap smear screening began.
- 1946- Aylesbury spatula was developed to scrape the cervix, collecting the sample for the Pap smear.
- 1951- First successful in-vitro cell line, derived from biopsy of cervical cancer of Henrietta Lacks.
- 1976- Harald Hausen and Gisam found HPV DNA in cervical cancer and genital warts.
- 1998- Bethesda System for reporting Pap results was developed.
- 2006- First HPV vaccine approved by the FDA.
- 2008- Hausen wins the Nobel Peace Prize for his work on HPV.
- 2014- FDA approves Primary HPV Testing from ATHENA Trial Update.

ATHENA was the largest prospective cervical cancer screening study in the US. Enrolled 47,208 women >21 years undergoing routine cervical cancer screening. It served as the FDA registrational study for the cobas HPV Test.

Cervical cancer is a sexually transmitted cancer mainly because of HPV. The major types are 16 and 18. Invariably all cervical cancers are caused by high risk HPV types.

Anatomically, it occurs at the transformation zone, a high turnover area. Pluripotent cells located here differentiate either to glandular or squamous cells e.g. more sexual activity leads to more differentiation to squamous cells. Infection of these cells with HPV (mechanism still unknown) alters the cell.

Fortunately, the cancerous cells must involve the whole thickness of the cervix for you to get cancer(i.e from CIS to CIN1 to CIN 2 to CIN 3 to LSIL TO HSIL), so screening can actually detect the cancer and halt it by early treatment.

In normal population HPV prevalence is 5-20% and normal women may clear it by their natural defenses within 3 years.

Screening for cervical cancer

- Cytology has its limitations
- VIA/VILI used for resource limited setting. Allows you to look and treat. However has low specificity.
- HPV testing- allows you to stratify women as either no risk(no HPV) or high risk(has HPV type 16 and 18 thus subjected to colposcopy, other HPV + triaged with cytology and if normal follow up in 12 months , if ASCUS seen do colposcopy)
The problem is that it can miss women with high grade dysplasia .

Women with abnormal triage results in resource limited settings should be offered immediate treatment or colposcopy in all other settings.

The recommended treatment options for precursor lesions are LEEP or ablative treatments such as cryotherapy or cold coagulation.

Focus on HPV Testing

- Molecular test- PCR-Highly sensitive
- More sensitive than PAP
- FDA approved Cobas 4800
- More accurate than PAP (> 95% sensitive compared to 60% for PAP)
- Automated test
- Quicker results
- Can be done on liquid based cytology samples and self collected samples.

Age and frequency testing

HPV DNA testing is recommended in all resource settings.

- **Maximal setting-** ages 25 to 65 years, every 5 years
- **Enhanced setting-**ages 30-65 years, if two consecutive negative results at 5 year intervals, then every 10 years
- **Limited setting-** ages 30-49 years, every 10 years if negative (≥ 3 screens in a lifetime)
- **Basic setting-** ages 30-49 years, one to three times during a lifetime.

ASCO- Every woman no matter where she lives should have cervical cancer screening.

Presentation 3 : Profiles of Cancer patients at Texas Cancer Centre- Dr Catherine Nyongesa

Texas Cancer Centre was started in 2010.

2014-718 patients

2015- 2154 patients

2016- 3500 patients, 1029 insured, the rest uninsured. Only 25% of the patients are insured.

30% of patients in need of radiotherapy.

About 20% of patients are lost to follow-up.

Top cancers in females are Breast(426), Cervix(286) and Oesophagus(83) in that order.

Top male cancers are Prostate (142), Nasopharynx(121), Oesophagus and stomach.

Most patients are women.

Nairobi is the leading region by incidence of cancer.

Conclusion

- Number of cancer cases are increasing.
- 60% of the cancers occur in patients less than 50 years of age.
- 20% of patients succumb to the disease.
- More women affected at 63% to 37% in men respectively.
- 75% of patients are uninsured.
- Breast cancer affects older women (30-70) compared to cervix (30-60).

Limitations

Collected over short period of time.

Texas Cancer Centre is based in Nairobi.

QUESTIONS AND ANSWERS

1. PSA TESTING

-Diagnosis vs screening: Diagnosis is for symptomatic patients while screening is for symptomatic patients.

- PSA screening: discuss prior screening with the patient

- Mass screening has no added value, screening should be individualized according to age of patient and other factors.

2. CERVICAL CANCER

- Smoking contributes to cervical cancer but does not cause it.

- High cost of HPV testing at KShs.3500 a concern on accessibility.

- HPV testing should be more frequent in the setting of HIV/AIDS.

3. Penile cancer is extremely rare, usually HIV related and occurs in uncircumcised males.

4. Hybrid capture; cannot be used on its own.