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Management of cervical cytology smears in Tygerberg Hospital GSA

- The incidence of cervical cancer cases in South Africa is 44.4/100 000.
- It is the second leading cause of female cancer in South Africa, the leading cause of cancer for females 15-44 and the most common cause of female cancer deaths in SA.
- Cervical screening in the form of a cervical smear (commonly referred to as a PAP smear) and HPV testing, is used to identify pre-cancerous lesions. Once identified, intervention can be offered in order to prevent the development of cervical cancer.
- A patient with a cervical mass should have an urgent biopsy of the lesion which must be sent for histology. A cervical smear is an inappropriate investigation for these patients.

Abbreviations

- **AGC:** Atypical glandular cells (endocervical or not otherwise specified)
- **AGUS:** Atypical glandular cells of undetermined significance
- **AIS:** Adenocarcinoma-in-situ
- **ASC-H:** Atypical squamous cells cannot exclude a high-grade lesion
- **ASC-US:** Atypical squamous cells of undetermined significance
- **BSO:** Bilateral salpingo oophorectomy
- **CIN:** Cervical intraepithelial neoplasia
- **GSA:** Geographical Service delivery Area
- **HIV:** Human Immunodeficiency Virus
- **HPV:** Human Papilloma Virus
- **HSIL:** High grade squamous intra-epithelial lesion
- **LLETZ:** Large Loop Excision of the Transformation Zone
- **LSIL:** Low grade squamous intra-epithelial lesion
- **NILM:** Negative for Intraepithelial Lesion or Malignancy
- **Pap smear:** Papanicolaou cervical smear
- **SCC:** Squamous cell carcinoma
- **STI:** Sexually Transmitted Infection
- **WLHIV:** Women living with HIV

WHO MUST GET CERVICAL SCREENING?

- All **healthy HIV negative** women without any pathology:
  First smear at age 30 years, Second smear at age 40 years, Third smear at age 50 years
  - Do the smear with an Aylesbury spatula (if conventional method used) or with LBC brush (if LBC method used).
  - If the smear is inadequate, repeat with a cytobrush.
  - If the smear is still inadequate – discuss with a Gynae consultant for possible referral to the Gynaecology clinic.
  - If the first smear was after age 55 and was normal, no further screening is required.

- All **WLHIV** must have cervical smear done at the time of diagnosis. If normal, it should be repeated every 3 years.
- All sexually active women attending a gynaecology clinic for a **new gynaecological problem** should have a cervical smear taken.
- All patients with **post-menopausal bleeding** should have a new cervical smear performed.
- All patients that are **booked for gynaecological surgery** (including sterilization, hysterectomy, cautery of warts, BSO or myomectomy) should get a cervical smear (unless there is a documented normal smear taken in the last year).

SIGNS AND SYMPTOMS OF CERVICAL CANCER

- May be completely asymptomatic
- Abnormal vaginal bleeding between periods.
- Continuous vaginal discharge.
- Menstrual periods becoming heavier and lasting longer.
- Vaginal bleeding or pain during or after sexual intercourse.
- Increased urinary frequency.
- Vaginal bleeding after menopause.

WHAT TO LOOK OUT FOR WHEN DOING A CERVICAL SMEAR

Medical staff must do a full external and internal vaginal examination to look for any visible signs of sexually transmitted infections or any other pathology that will need attention. This includes genital warts, suspicious vaginal lesions or abnormal lesions on the cervix.

WHAT SHOULD WOMEN DO TO PREVENT ABNORMAL CERVICAL SMEARS

Primary prevention

- Young women should delay having sex.
- Always use condoms.
- General healthy lifestyle; stop smoking.
- HPV immunization.

Secondary prevention

- Comply with cervical screening as indicated to ensure early detection.
- Seek medical help if signs and symptoms of infection or cervical cancer are present e.g., abnormal vaginal discharge, lower abdominal pain, abnormal bleeding, etc.

INTERPRETATION OF CERVICAL SMEAR

	FULL NAME	WHAT TO DO
LSIL	**Low grade squamous intra-epithelial lesion**	Repeat cervical smear after 1 year; if second smear shows LSIL refer for colposcopy. If LSIL and pregnant, repeat smear 3 months after pregnancy.
HSIL	**High grade squamous intra-epithelial lesion**	Refer for colposcopy ± LLETZ if not pregnant. If pregnant: visualise cervix, if macroscopically normal, refer to a colposcopy clinic. If macroscopically abnormal, refer to the nearest gynae service for a biopsy.
AIS	**Adenocarcinoma-in-situ**	Refer to Gynae clinic for urgent appointment
ASC-US	**Atypical squamous cells of undetermined significance**	Repeat cervical smear after 1 year; if second CERVICAL also ASCUS or LSIL refer for colposcopy.
ASC-H	**Atypical squamous cells cannot exclude a high-grade lesion**	Refer for colposcopy.
AGUS	**Atypical glandular cells of undetermined significance**	<30 years old and not pregnant: Treat with Doxycycline 100mg 12 hourly for 14 days then repeat smear; if still AGUS, refer for colposcopy and do endometrial sampling. >30 years old: Refer for colposcopy and do endometrial sampling.
AGC	**Atypical glandular cells (endocervical or not otherwise specified)**	Refer for colposcopy and do endometrial sampling
SCC	**Squamous cell carcinoma**	If there is a cervical lesion the patient must be examined by a doctor. A cervical biopsy must be done and then the patient should be discussed with the Gynae clinic on the same day for further workup. If no identifiable lesion is visible please refer for an **URGENT** colposcopy.

When indicated, please refer patients to the closest colposcopy clinic. High risk lesions should ideally be referred within 3 months. The cervical smear should not be more than 6 months old. If more than 6 months, the patient needs an examination of the cervix and a repeat smear, provided that the cervix looks normal.

Please attach the CERVICAL smear result with a referral letter if any other concerns are noted.

Infective smears: treat if a definitive pathogen is present.

- Trichomonas infection: give 2g Metronidazole orally as a single dose to both sexual partners. Consider the full syndromic treatment for both, as there may be other underlying STI's as well (add Ceftriaxone 250mg IM as a single dose; and Azithromycin 1g, orally as a single dose).
- Candida infection: give clotrimazole vaginal cream daily (Give one tube)
- Gardnerella: (if the patient is symptomatic): give 2g Metronidazole orally as a single dose (not necessary to treat the sexual partner, as this is not a STI)
- It is not necessary to trace the patient for treatment if she does not return and the smear was normal.

WHAT TO TELL THE PATIENT ABOUT THE REASON FOR REFERRAL TO COLPOSCOPY

- Please inform the patient about the findings of her cervical smear. Depending on what her individual cervical smear result is, she will be counselled and treated accordingly.
- For colposcopy the patient will be examined and counselled again before any procedure is performed.
- The patient must attend the clinic even if they are menstruating.
- The patient can eat and drink in the morning and should be encouraged to take all chronic medication as normal.
- The patient will go home the same day and will be able to go to work the following day.
- All forms of contraception should be continued and if the patient is pregnant, she must inform the medical staff on arrival.

HPV TESTING

- HPV testing is not currently available in the public sector but is being used in the private
- There are more than 150 types of HPV that infect cutaneous and mucosal epithelium. Acute infection causes benign cutaneous lesions such as non-genital and genital warts, flat cervical condylomas or low-grade CIN.
- There are 15 HPV viruses that infect the genital tract and have the potential to cause malignant tumours, most commonly in the cervix.
- There are high-risk cancer associated HPV types OR oncogenic types. HPV 16 and 18 are the most common and account for about 70% of cervical cancers but other high-risk types include 31, 33, 45, 52 and 58.
- There are also low-risk types that are not associated with cervical cancer. HPV 6 and HPV 11 cause most cases of genital warts (condyloma acuminatum).

WHAT TO DO WITH HPV RESULTS

If **high risk** HPV **16 or 18** are identified with a **CERVICAL smear = NILM**	Refer for colposcopy
If **ANY high-risk** HPV i.e 16,18,31,33,45,52,58 is identified with an **abnormal CERVICAL smear**	Refer for colposcopy
If **ANY non 16 or 18 high-risk** HPV i.e 31,33,45,52,58 is identified with a **normal CERVICAL smear**	Repeat smear in 1 year
If **NO high-risk** HPV (i.e NO 16,18,31,33,45,52,58) with **CERVICAL smear = NILM**	Follow-up as per national guideline for routine cervical smears

FOLLOW UP AFTER LLETZ

If a patient has had a LLETZ procedure she will be given a copy of her notes and told to attend her local clinic in 6 weeks' time to check the results.

Result	What to do
CIN 1/HPV/ LSIL completely excised	Repeat CERVICAL smear 1 year
CIN 1/ HPV/ LSIL incompletely excised	Repeat CERVICAL smear 1 year
CIN II/III/ HSIL completely excised	Repeat CERVICAL smear 6 months
CIN II/III/ HSIL incompletely excised	Repeat CERVICAL smear 6 months
Squamous cell carcinoma or moderately differentiated keratinizing carcinoma	Urgent referral to nearest referral hospital

- Repeat the post-LLETZ cervical smear when indicated as above.
- If the follow up smear is normal, the patient must have yearly smears at her local clinic for 3 years.
- Continue providing contraception.
- If WLHIV please continue ARTs.
- Advise the patient to stop smoking if she is smoking.

FOLLOW UP AFTER HYSTERECTOMY FOR CIN LESIONS

After a hysterectomy for CIN the patient will be booked for follow-up at the gynae clinic at 6 weeks to review the result. If no cancer found, she will be down referred to the local clinic for a repeat vault smear in 6 months.

Do a vault smear at local clinic in 6 months

- If normal, repeat yearly for 5 years.
- If abnormal (VIN of VAIN lesions) refer back to colposcopy clinic.

COMMUNICATION

THE LOCAL CLINIC:

All women must return for their Cervical smear results.

Make the appointment for colposcopy and inform the colposcopy clinic of name of the referring clinic and attach the relevant result with the referral letter.

THE COLPOSCOPY CLINIC:

Supply the referring clinic with a copy of the written report of the procedure done.

COLPOSCOPY CLINICS AVAILABLE

Tygerberg Hospital: Clinics MONDAY, WEDNESDAY, THURSDAY	**Ph 021 938 4428** Bookings will be taken after 11am
Khayelitsha Hospital: Clinic TUESDAY	**Ph: 021 360 4548/4362**
Helderberg Hospital: Clinic Alternate FRIDAY	**Ph: 021 810 6668/6666**
Karl Bremer: Clinic Alternate FRIDAYS	**Mail: kbhgopd@gmail.com** **Vula urgent cases to Gynae Emergency Centre**
Paarl Hospital: TUESDAY and THURSDAY (and Outreach)	**Ph: 021 860 2749**
Worcester Hospital: TUESDAY and THURSDAY	**Ph: 023 348 6453**

Referrals as per gynaecology referral pathways.

Signed: Dr JL Butt

COMMITTEE RESPONSIBLE	Dr JL Butt; Dr M Bryan-Mc Innes, Prof S Gebhardt, Dr A Barnard
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EVIDENCE	Available on request. SA National Cervical Cancer Policy available at https://www.health.gov.za/wp-content/uploads/2021/07/cervical-cancer-policy.pdf