

# Internal Female Genitalia

## Internal Female Genitalia

- ❖ Vaginal Vault
- ❖ Cervix
- ❖ Cervical OS
- ❖ Variations (complete/partial hysterectomy)

## Internal Female Genitalia

### Vaginal Vault

- The **Vaginal Vault** is a tubular tract leading from the uterus to the exterior of the body.
- During Tanner Stage V - the vagina elongates and vaginal mucosa thickens.

## Internal Female Genitalia

### Vaginal Vault

- **Vaginal Vault Size –**

#### Relaxed state

- diameter is < 1 inch
- length 3-4 inches

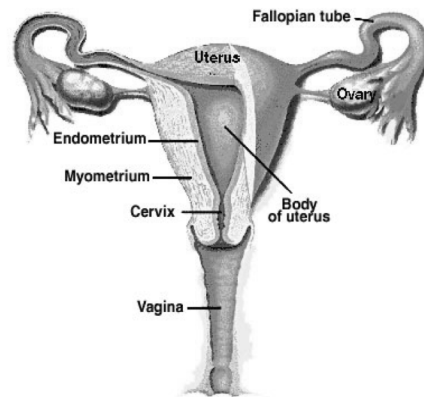
#### Prolonged Excitatory Response –

- diameter 1-2 inches at hymen, can increase 2-3 inches towards cervix
- Length 6-7 inches

*Measurements are averaged and may be altered due to vaginal childbirth*

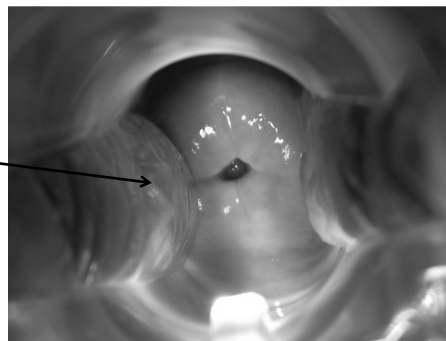
## Internal Female Genitalia

### Vaginal Vault



## Internal Female Genitalia

### Vaginal Vault



## Internal Female Genitalia

### Cervix

- The Cervix is the lower, narrow portion of the uterus where it joins with the top end of the vagina.
- It is cylindrical or conical in shape and protrudes through the upper anterior vaginal wall.
- Approximately half its length is visible with appropriate medical equipment; the remainder lies above the vagina beyond view.

## Internal Female Genitalia

### Cervix

- The portion projecting into the vagina is referred to as the ectocervix. On average, the ectocervix is 3 cm long and 2.5 cm wide
- Cervical Mucous present – less acidic closer to ovulation with increased production of water based mucous. Cervical OS opens slightly during ovulation



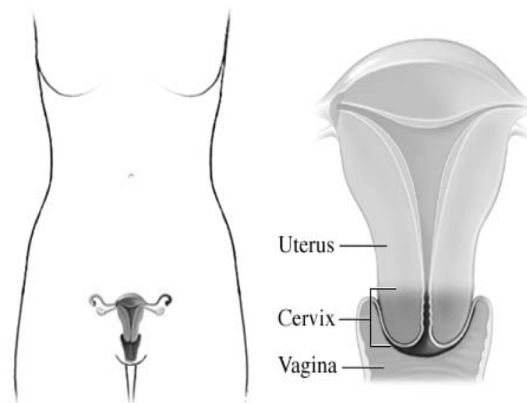
## Internal Female Genitalia

### Cervical OS

- The Ectocervix's opening is called the External OS.
- The size and shape of the external os and the ectocervix varies widely with age, hormonal state, and whether the woman has had a vaginal birth.
- **Non vaginal Birth** = small circular opening
- **Vaginal Birth** = bulkier, wider, slit-like opening

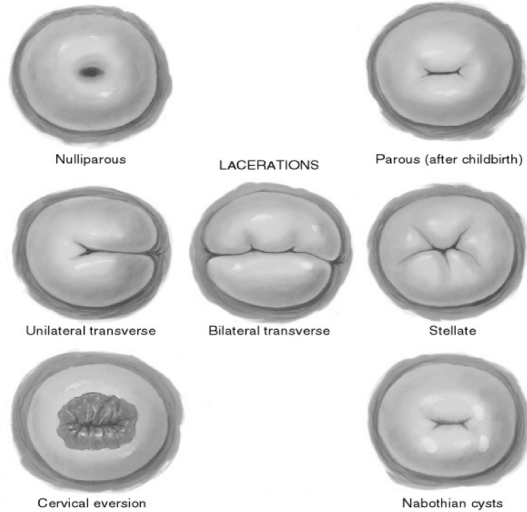
## Internal Female Genitalia

### Cervix



# Internal Female Genitalia

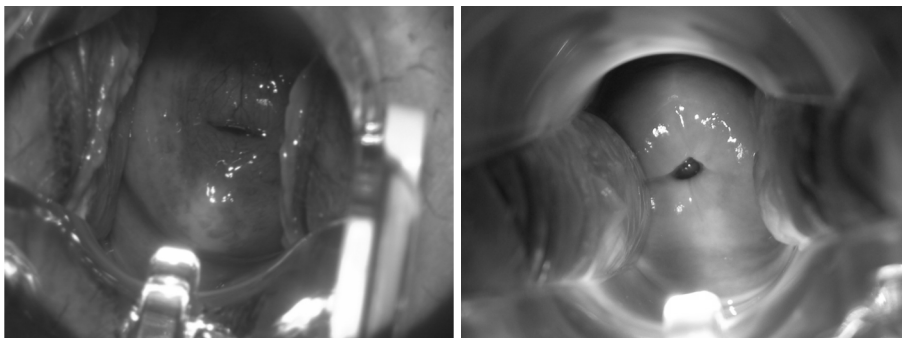
NORMAL VARIATIONS OF THE CERVIX



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# Internal Female Genitalia

## Cervix/Cervical OS

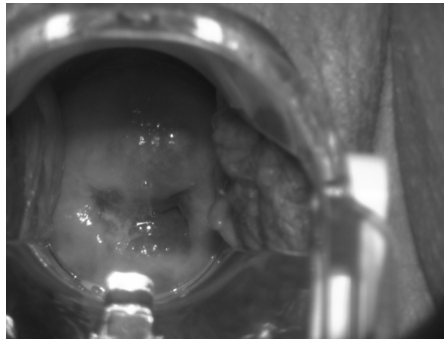


Cervical OS slit-like appearance after vaginal birth

Cervical OS slightly opened - near ovulation or menstruation

## Internal Female Genitalia

### Cervix/Cervical OS



OS with slit-like appearance and increased fluid/mucous found

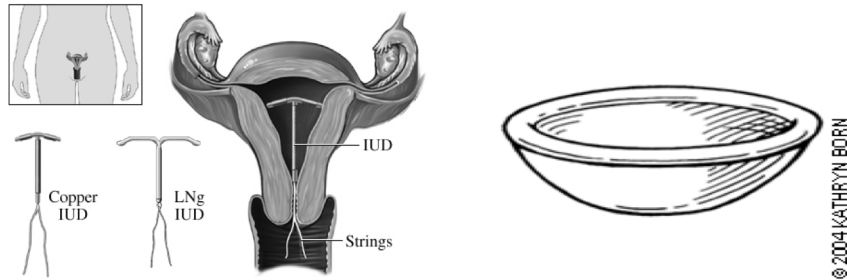
## Internal Female Genitalia

### Complete/Partial Hysterectomy

- Complete = Removal of body, fundus and cervix of the uterus
- Partial = Cervix still intact and able to visualize during examination
- No Cervix
- Piece of Cervix
- Lack of lubrication
- Tone

## Internal Female Genitalia

### IUD/Diaphragm

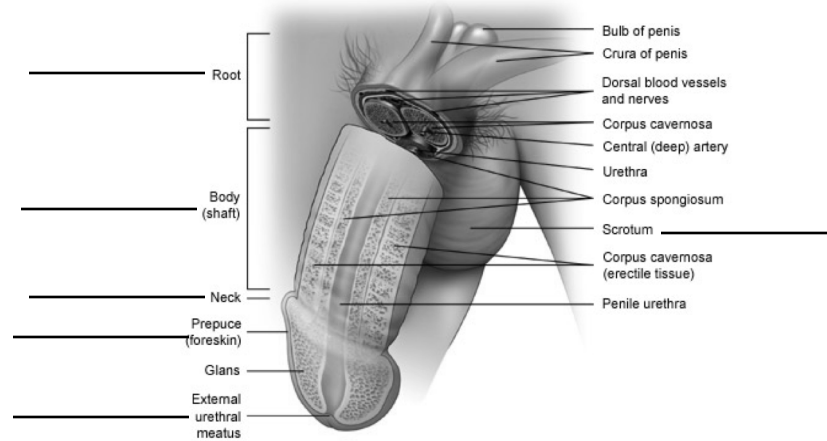


## Male Genitalia

## Male Genitalia

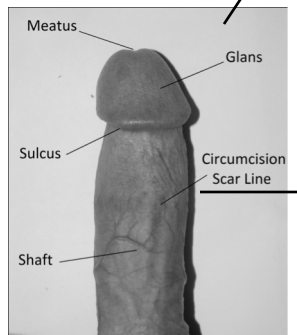
- Root
- Body (Shaft)
- Neck
- Prepuce (Foreskin)
- Glans
- Urethral Meatus
- Scrotum

## Male Genitalia



# Male Genitalia

## Circumcised Versus Uncircumcised



## **Anatomical Variations and Disease Process**

## Normal Variations and Disease Process

- Important for recognition of disease process versus injury and normal variations that may be found during genital examination
- Appropriate referrals and treatment recommendations should be offered. Thorough report should be given to physician as well

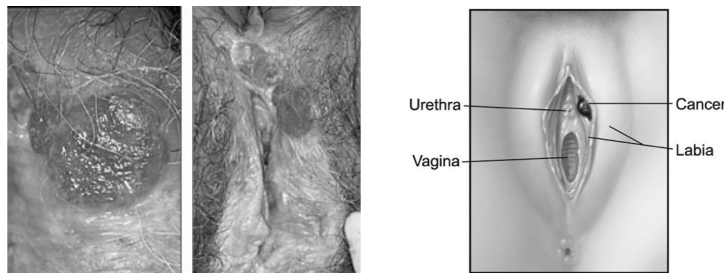
## Disease Process

## Disease Process

- **Ohio Department of Health protocol states that the patient should NEVER have baseline STD screening at the time of a forensic examination.**
- Rationale = exams performed within 96 hours of assault – if they are positive at time of exam the transmission most likely occurred PRIOR to assault (possible bias during judicial process)
- Patients are treated with prophylactic empirical medications prior to discharge from Emergency Department

## Disease Process

### Vulvular Cancer



*Generally effects isolated area or region of the vulva*



## Disease Process

### Vulvular Cancer



*Generally effects isolated area or region of the vulva*

## Disease Process

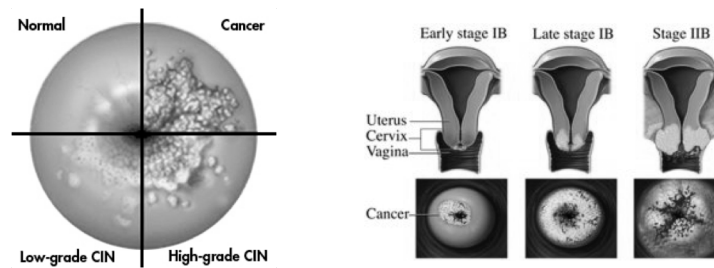
### Vulvular Cancer



*Generally effects isolated area or region of the vulva*

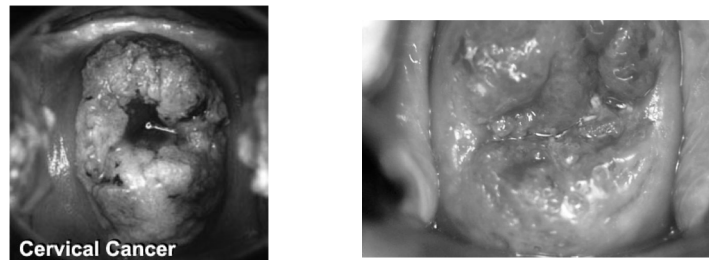
## Disease Process

### Cervical Cancer



## Disease Process

### Cervical Cancer



Amount of invasion visible on cervix is dependant upon staging

## Disease Process

### Penile Carcinoma

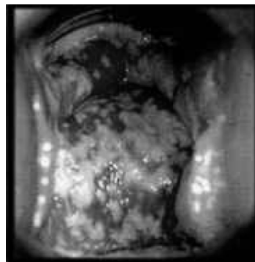


**Penile Carcinoma:**  
*the penis has been transformed  
into a solid mass*



## Disease Process

### Candida Vaginitis/Yeast

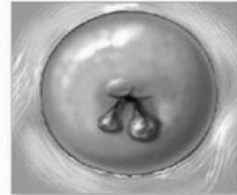


*Thick white discharge, may completely encompass cervix*

## Disease Process

### Cervical Polyps

Cervical polyps



As viewed through a speculum



Sagittal view

©ADAM

*May bleed easily if manipulated during speculum examination*

## Questions?

## Normal Variations

- Normal Variations to female anatomy may commonly be mistaken for injury
- A Sexual Assault Nurse Examiner should be able to differentiate for proper medical referrals if needed and injury identification

## Normal Variations



### Hyper-pigmentation

May be mistaken for bruising/injury

## Normal Variations



### Labial Hypertrophy

Large labial folds generally on labia minora

## Normal Variations



### Lichen Sclerosus

May commonly appear like scar tissue, generally white in appearance or discoloration to the skin. May be found on cervix as well



## Other Variations

### Hypospadias



Penile hypospadias



Penilescrotal hypospadias  
(with chordee)



Scrotal hypospadias

A deformity of the penis, in which the urethra is located on the plantar surface of the penis.

## Other Variations

### **Hyperspadias**

- A deformity in which the urethra is located on the superior/surface of the penis
- Both Hypospadias and Hyperspadias can be corrected with surgical intervention

## Other Variations

### **Female Genital Mutilation**

- Ritual ceremonies involving cutting/altering women's genitalia usually rooted in culture or religious beliefs in certain ethnicities.
- Some countries still practice gender mutilation:
  - South Africa
  - Some Middle Eastern Cultures
  - Certain Asian cultures

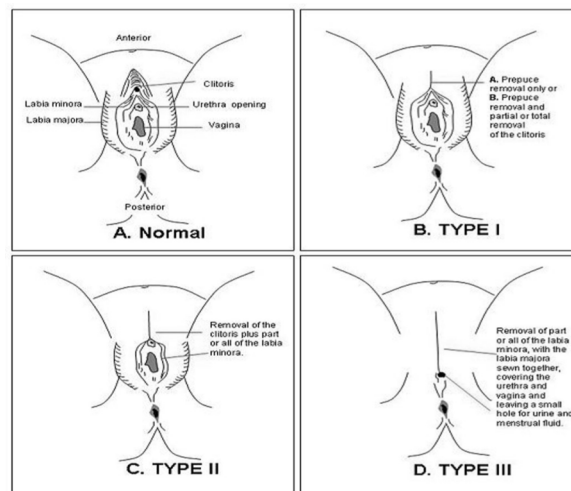


## Other Variations

### Female Genital Mutilation

- This act is not seen as mutilation in many cultures
- Persons practicing this act may not consider marrying a women who has not had this performed
- One of several procedures may be completed to alter sexual response of women by altering their anatomical structures

## Other Variations



## Other Variations

### **Female Genital Mutilation**

- Criminalization of Gender Mutilation:
  - Every state in the US have developed laws criminalizing this process
  - Global perspective: UN, WHO, International VAW agree that individual human rights supersede these cultural practices

## Other Variations

### **Female Genital Mutilation**

- Forensic Science is relevant to this issue to ensure that clinical signs are recognized to report all manners of abuse and suspicious trauma
- Signs of traumatic injury may be amplified due to the altering of the anatomical structure

## Other Variations

### Female Genital Mutilation



## Other Variations

### Elective Gender Remodification

- Numerous techniques used to alter anatomical structures.
- Implication of forensic science;
  - may have more severe injuries related to sexual assault
  - may be less inclined to report assault or seek medical treatment

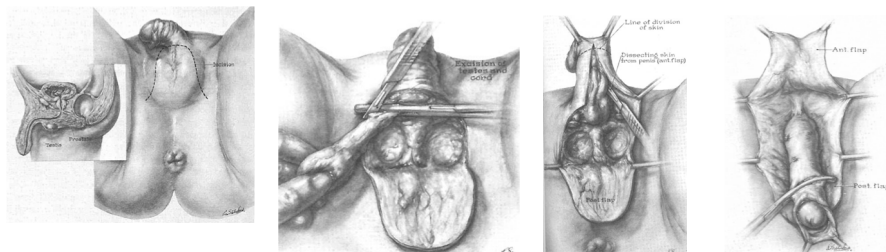
## Other Variations

### Elective Gender Remodification

- Increase in injuries related to hormone level changes effecting physiological changes to the genital area which may lead to higher severity of injuries
- Process is generally performed over numerous surgeries with extensive healing periods

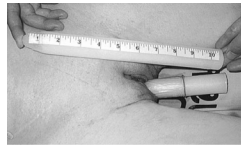
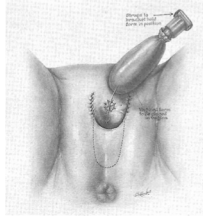
## Other Variations

### Elective Gender Remodification



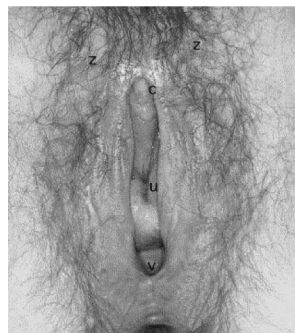
## Other Variations

### Elective Gender Remodification



## Other Variations

### Elective Gender Remodification



Which picture is post gender re-assignment surgery?

## Forensic Implications

- \*Disease process or anatomical variations may mask injuries obtained during sexual assault:
  - injuries
  - pain
- \*Obtaining high quality forensic specimens may be more difficult to obtain due to patient discomfort (ie; speculum insertion)
- \*Examiner may face more difficult challenges obtaining quality forensic photographs (ie; colposcopic photography)
- \*Thorough documentation should be done for all findings without diagnoses (objective documentation without assumption of diagnosis) – ie; disease process

## Medical Implications

- \*Disease process or anatomical variations may increase likelihood of injuries acquired during assault
- \*Medical intervention may supersede forensic intervention depending upon injuries
- \*Thorough referrals should be offered dependant upon findings
- \*Secondary trauma likelihood and increased risk for infection



Other Variations

**Questions?**