Vulva & Vagina/ Benign & Malignant

Topic- based Uworld Questions

Block 1, 2, 7, 8

The following vignette applies to the next **2** items.

Item 1 of 2

A 22-year-old woman comes to the clinic for a routine examination. The patient is well and has no concerns. She is a gymnast, and her main activity is the balance beam. Three months ago, she sustained a vulvar contusion during a competition but otherwise she has been healthy. The patient is sexually active with 2 male partners and uses an intrauterine device for contraception. She does not use tobacco, alcohol, or illicit drugs. Examination shows a mobile, soft, nontender, flesh-colored, 2-cm cystic mass at the 4 o'clock position at the base of the left labium majus. Which of the following is the most likely diagnosis for this patient?

A. Bartholin duct cyst
B. Condylomata acuminata
C. Gartner duct cyst
D. Hematoma
E. Molluscum contagiosum
F. Primary syphilis
G. Skene gland cyst

Submit

The following vignette applies to the next **2** items.

Item 1 of 2

A 22-year-old woman comes to the clinic for a routine examination. The patient is well and has no concerns. She is a gymnast, and her main activity is the balance beam. Three months ago, she sustained a vulvar contusion during a competition but otherwise she has been healthy. The patient is sexually active with 2 male partners and uses an intrauterine device for contraception. She does not use tobacco, alcohol, or illicit drugs. Examination shows a mobile, soft, nontender, flesh-colored, 2-cm cystic mass at the 4 o'clock position at the base of the left labium majus. Which of the following is the most likely diagnosis for this patient?

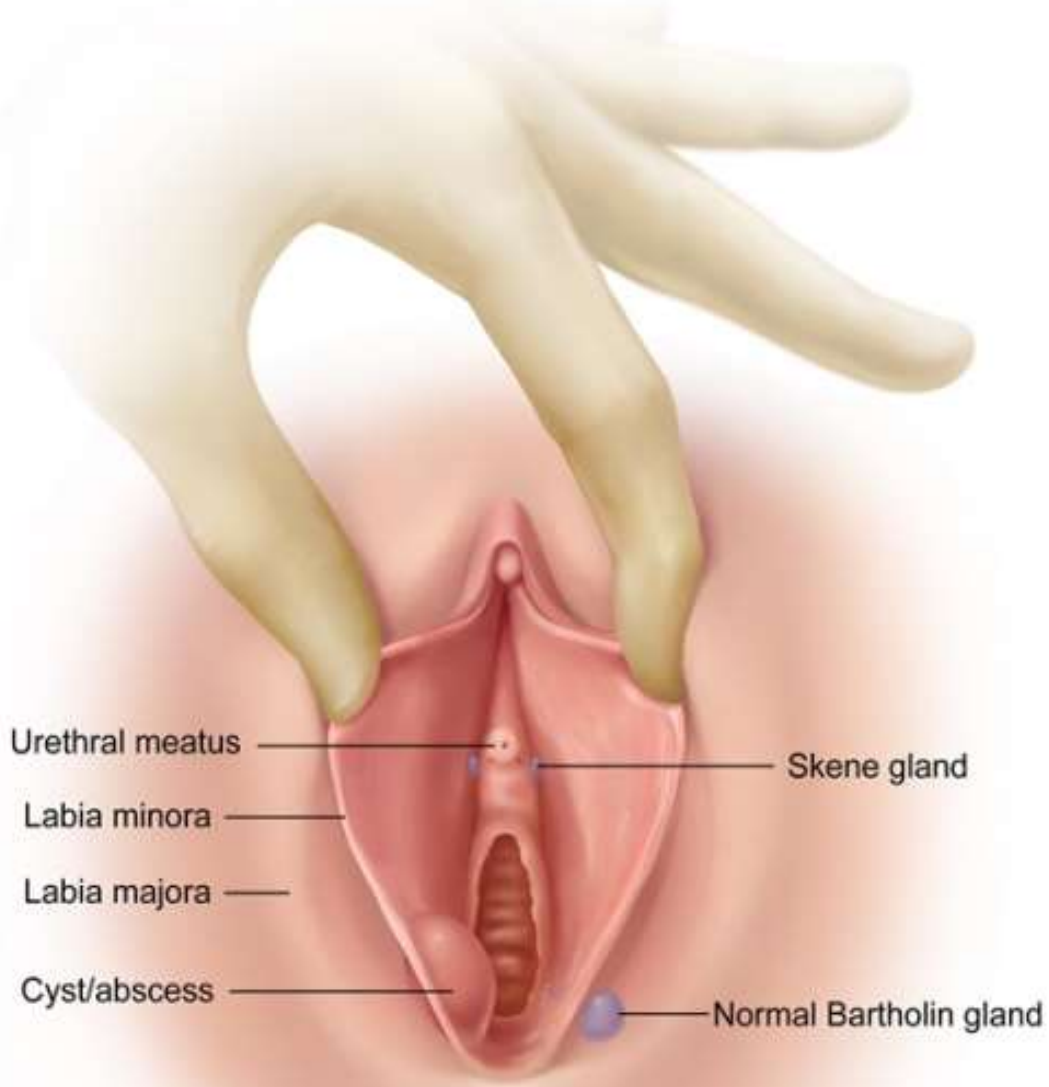
- ✓ A. Bartholin duct cyst (81%)
- B. Condylomata acuminata (3%)
- C. Gartner duct cyst (4%)
- D. Hematoma (3%)
- E. Molluscum contagiosum (1%)
- F. Primary syphilis (0%)
- G. Skene gland cyst (4%)

Omitted
Correct answer
A

81%
Answered correctly

02 secs
Time Spent

01/05/2020
Last Updated


Urethral meatus
Skene gland
Labia minora
Labia majora
Cyst/abscess
Normal Bartholin gland

This patient has an asymptomatic **Bartholin duct cyst**. The Bartholin glands are located bilaterally at the posterior vaginal introitus and have ducts that drain into the **vulvar vestibule** at the **4 and 8 o'clock positions** to provide vulvovaginal lubrication. The Bartholin ducts may become obstructed either from accumulation of mucus or secondary to edema and trauma, though many cases are idiopathic. The resultant obstruction causes proximal duct distension, resulting in cyst formation. This **soft, mobile, nontender** cystic mass can be **asymptomatic** and may be found incidentally at the **base of the labia majora**. With sufficient enlargement, it may cause discomfort during walking, sitting, and sexual intercourse.

(Choice B) Condylomata acuminata result from human papillomavirus infection, particularly types 6 and 11. Growths may be exophytic or sessile, and either solitary or multiple, but condylomata do not form cystic masses.

(Choice C) A Gartner duct cyst results from incomplete regression of the Wolffian duct during fetal development. These cysts appear along the lateral aspects of the upper anterior vagina. In contrast to Bartholin gland cysts, they do not involve the vulva.

(Choice D) A vulvar hematoma typically results from local trauma and presents as a tender, ecchymotic, firm mass.

(Choice E) Molluscum contagiosum presents as small, firm, painless bumps with central umbilication. Although mostly asymptomatic, it may cause localized itching.

(Choice F) Primary syphilis presents with a chancre (ie, a painless ulcer with a raised edge), not a cystic mass.

(Choice G) Skene glands are bilateral paraurethral glands in the anterior vaginal vestibule. Skene gland cysts may form with duct obstruction but would be located lateral to the urethral meatus.

Educational objective:
Bartholin duct cysts are soft, mobile, nontender masses at the base of the labia majora at the 4 and 8 o'clock positions. These cysts can be asymptomatic and found incidentally on examination.

References

- Benign tumors and tumor-like lesions of the vulva.
- Benign vulvar tumors.

Item 2 of 2

Which of the following is the most appropriate course of action for this patient?

- A. Broad-spectrum antibiotic therapy
- B. Cryotherapy of the lesion
- C. Incision and drainage
- D. Observation and expectant management
- E. Topical podophyllotoxin
- F. Vulvar biopsy

Submit

Item 2 of 2

Which of the following is the most appropriate course of action for this patient?

- A. Broad-spectrum antibiotic therapy (1%)
- B. Cryotherapy of the lesion (1%)
- C. Incision and drainage (30%)
- ✓ D. Observation and expectant management (66%)
- E. Topical podophyllotoxin (0%)
- F. Vulvar biopsy (0%)

Omitted
Correct answer
D

66%
Answered correctly

01 sec
Time Spent

01/05/2020
Last Updated

Explanation

Asymptomatic Bartholin duct cysts in young women do not require intervention as most of the cysts drain spontaneously and resolve on their own. Therefore, **observation and expectant management** are recommended for these patients. In contrast, patients with symptomatic cysts or abscesses are treated with incision and drainage **(Choice C)** followed by placement of a Word catheter to reduce the risk of recurrence. Some women develop recurrent Bartholin cysts or abscesses and undergo a marsupialization procedure, which creates another point of drainage for the Bartholin gland.

Explanation

Asymptomatic Bartholin duct cysts in young women do not require intervention as most of the cysts drain spontaneously and resolve on their own. Therefore, **observation and expectant management** are recommended for these patients. In contrast, patients with symptomatic cysts or abscesses are treated with incision and drainage **(Choice C)** followed by placement of a Word catheter to reduce the risk of recurrence. Some women develop recurrent Bartholin cysts or abscesses and undergo a marsupialization procedure, which creates another point of drainage for the Bartholin gland.

(Choice A) Broad-spectrum antibiotic therapy is not required for Bartholin cysts and is recommended for Bartholin abscesses only if there are signs (eg, fever) or risk factors (eg, pregnancy, immunocompromise) for systemic infection.

(Choices B and E) Cryotherapy and topical podophyllotoxin treat condylomata acuminata; neither is used in the treatment of a Bartholin cyst.

(Choice F) Vulvar biopsy is indicated in patients with possible Bartholin gland carcinoma, which typically presents as a solid, fixed mass in older women (eg, age >60).

Educational objective:
Observation and expectant management are recommended for an asymptomatic Bartholin cyst as spontaneous resolution may occur. Symptomatic cysts or abscesses are treated with incision and drainage, followed by Word catheter placement.

References

- Clinical pathology of Bartholin's glands: a review of the literature.
- Word balloon catheter for Bartholin's cyst and abscess as an office procedure: clinical time gained.

Obstetrics & Gynecology	Female Reproductive System & Breast	Bartholin duct cyst and abscess
Subject	System	Topic

Exhibit Display

Word catheter

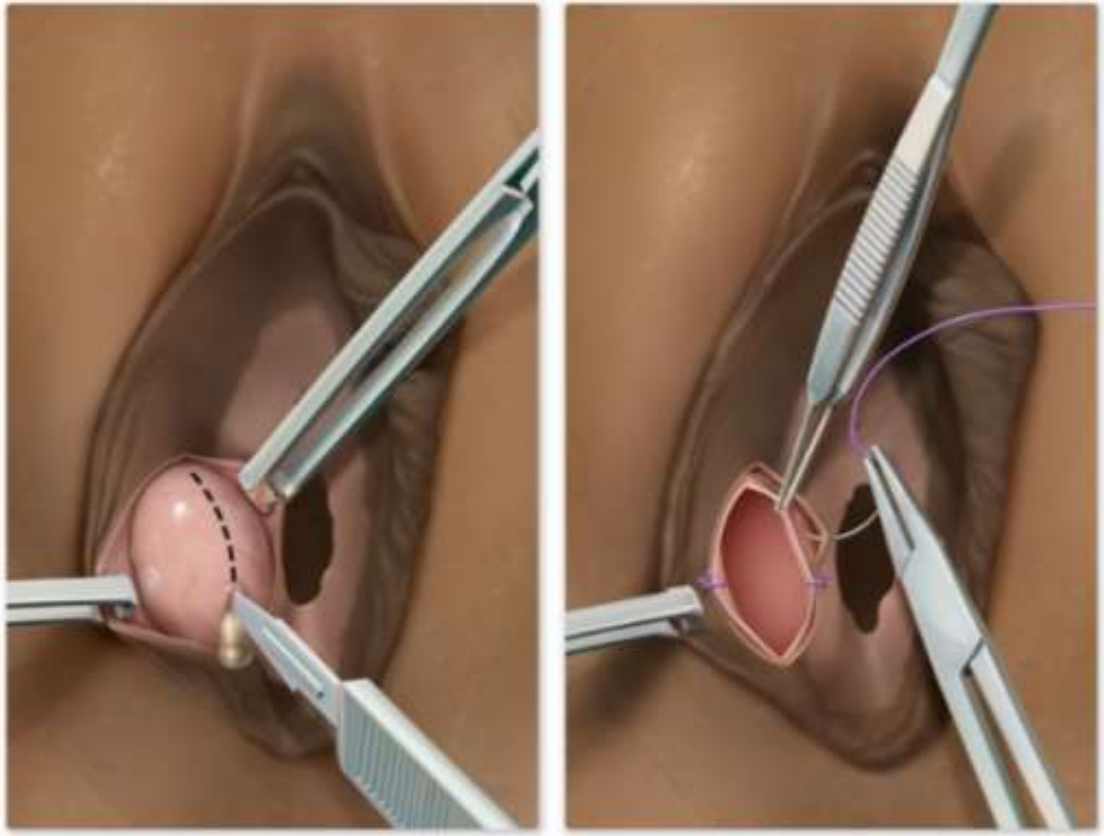
Zoom In | Zoom Out | Reset | Add To New Card | Existing Card

Exhibit Display

Bartholin gland marsupialization

1. Incise & drain cyst or abscess

2. Evert edges of cyst or abcess & suture to mucosal edge



Zoom In | Zoom Out | Reset | Add To New Card | Existing Card

A 52-year-old postmenopausal woman comes to the office for evaluation of vulvar irritation. The patient wears sanitary napkins due to stress urinary incontinence and occasionally notices streaks of blood on the napkin. She is sexually active and has had some pain with sexual intercourse. The patient underwent a hysterectomy and bilateral salpingo-oophorectomy at age 48 for adenomyosis. She has had abnormal Pap tests previously but normal colposcopy results. The patient currently uses a nicotine patch for smoking cessation. Vital signs are normal. Pelvic examination shows multiple vulvar excoriations with surrounding erythema. There is an erythematous, friable plaque on the left labium majus. On speculum examination, the vagina has no lesions or abnormal discharge. Which of the following is the most likely diagnosis in this patient?

- A. Condylomata acuminata
- B. Contact dermatitis
- C. Lichen planus
- D. Lichen sclerosus
- E. Vulvar cancer
- F. Vulvovaginal atrophy

Submit

A 52-year-old postmenopausal woman comes to the office for evaluation of vulvar irritation. The patient wears sanitary napkins due to stress urinary incontinence and occasionally notices streaks of blood on the napkin. She is sexually active and has had some pain with sexual intercourse. The patient underwent a hysterectomy and bilateral salpingo-oophorectomy at age 48 for adenomyosis. She has had abnormal Pap tests previously but normal colposcopy results. The patient currently uses a nicotine patch for smoking cessation. Vital signs are normal. Pelvic examination shows multiple vulvar excoriations with surrounding erythema. There is an erythematous, friable plaque on the left labium majus. On speculum examination, the vagina has no lesions or abnormal discharge. Which of the following is the most likely diagnosis in this patient?

- A. Condylomata acuminata (5%)
- B. Contact dermatitis (8%)
- C. Lichen planus (12%)
- D. Lichen sclerosus (14%)
- ✓ E. Vulvar cancer (48%)
- F. Vulvovaginal atrophy (10%)

Omitted
Correct answer
E

48%
Answered correctly

02 secs
Time Spent

01/28/2020
Last Updated

Explanation

Vulvar cancer

Vulvar cancer	
Etiology	• Persistent HPV infection • Chronic inflammation
Risk factors	• Tobacco use • Vulvar lichen sclerosus • Immunodeficiency • Prior cervical cancer • Vulvar/cervical intraepithelial neoplasia
Clinical features	• Vulvar pruritus • Vulvar plaque/ulcer • Abnormal bleeding
Diagnosis	• Biopsy

HPV = human papillomavirus.

This patient's erythematous, friable plaque on the labium majus is concerning for **vulvar squamous cell carcinoma**. A risk factor for the development of vulvar cancer is **persistent human papillomavirus (HPV) infection**, particularly with types 16 and 18, which are also associated with cervical cancer (as seen in this patient's prior abnormal Pap tests). While most HPV infections are transient, patients with either **chronic tobacco use** or immunodeficiency (eg, HIV) are less likely to clear the infection, resulting in dysplastic changes.

Constant dysplastic changes over the vulvar squamous cells can result in a **unifocal**, **friable plaque** or ulcer, typically on the labia majora, that produces persistent **vulvar irritation** and/or pain. Patients may also have **intermittent bleeding** and **dyspareunia** (as seen in this patient) or an asymptomatic lesion found on routine examination. Diagnosis is with vulvar biopsy, which evaluates for depth of invasion and determines management options.

(Choice A) Patients with condylomata acuminata are typically asymptomatic or have mild vulvar pruritis. In contrast to this patient, condylomata

This patient's erythematous, friable plaque on the labium majus is concerning for **vulvar squamous cell carcinoma**. A risk factor for the development of vulvar cancer is **persistent human papillomavirus (HPV) infection**, particularly with types 16 and 18, which are also associated with cervical cancer (as seen in this patient's prior abnormal Pap tests). While most HPV infections are transient, patients with either **chronic tobacco use** or immunodeficiency (eg, HIV) are less likely to clear the infection, resulting in dysplastic changes.

Constant dysplastic changes over the vulvar squamous cells can result in a **unifocal**, **friable plaque** or ulcer, typically on the labia majora, that produces persistent **vulvar irritation** and/or pain. Patients may also have **intermittent bleeding** and **dyspareunia** (as seen in this patient) or an asymptomatic lesion found on routine examination. Diagnosis is with vulvar biopsy, which evaluates for depth of invasion and determines management options.

(Choice A) Patients with condylomata acuminata are typically asymptomatic or have mild vulvar pruritis. In contrast to this patient, condylomata acuminata typically present with multiple lesions that are fungated or dome-shaped.

(Choice B) Contact dermatitis may occur secondary to constant irritation from sanitary napkins; however, it typically does not cause a discrete, friable plaque.

(Choice C) Vulvar lichen planus typically presents with pruritic, purple-hued plaques that are sometimes associated with thin, white striae around the labia and vulva (ie, Wickham striae).

(Choice D) Vulvar lichen sclerosus lesions are typically multiple white papules that converge into plaques. A single lesion is uncommon.

(Choice F) Women with vulvovaginal atrophy typically have thinning of the skin and fusion of the labia majora, rather than a distinct, friable vulvar plaque.

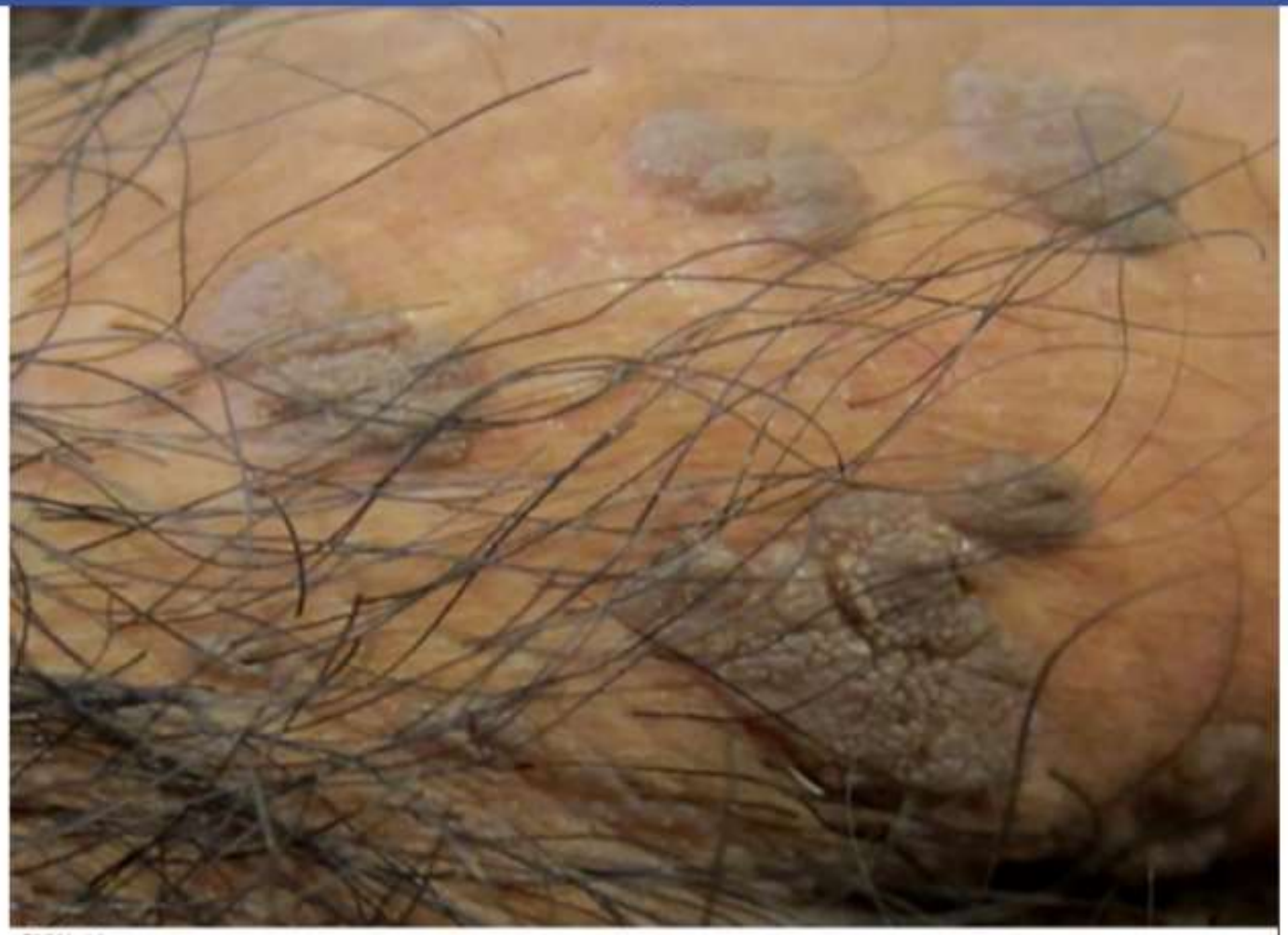
Educational objective:
Vulvar squamous cell carcinoma often occurs secondary to persistent human papillomavirus infection, which is associated with chronic tobacco use. Patients with vulvar cancer often have vulvar irritation, intermittent bleeding, and a unifocal, friable mass commonly located on the labia majora.

References

- Genital cancers in women: vulvar cancer.

asymptomatic lesion found on routine examination. Diagnosis is with vulvar biopsy, which evaluates for depth of invasion and determines

Exhibit Display



©UWorld

Zoom In | Zoom Out | Reset | Add To New Card | Existing Card

A 68-year-old woman comes to the office due to blood-tinged vaginal discharge. The patient has had intermittent, slightly malodorous discharge for the past several weeks but has not passed large clots or had heavy vaginal bleeding. Medical history is significant for exposure to diethylstilbestrol in utero that resulted in infertility. She underwent menopause at age 55 and has used combined menopause hormone therapy for several years. Her mother was diagnosed with endometrial cancer at age 54, and her uncle was diagnosed with colorectal cancer at age 70. The patient has smoked a pack of cigarettes daily for the last 40 years and drinks a few glasses of wine each week. BMI is 32 kg/m^2. Pelvic examination demonstrates a blood-tinged watery discharge and a 3-cm ulcerated lesion on the posterior vaginal wall; the cervix appears normal. Transvaginal ultrasound shows a 2-mm endometrial stripe. Biopsy of the lesion demonstrates squamous cell carcinoma. Which of the following is the greatest risk factor for this patient's diagnosis?

- A. Body mass index (2%)
- ✓ B. Chronic tobacco use (53%)
- C. Diethylstilbestrol exposure in utero (34%)
- D. Family history (3%)
- E. History of infertility (2%)
- F. Prior menopause hormone therapy (2%)

Omitted
Correct answer
B

53%
Answered correctly

02 secs
Time Spent

04/13/2020
Last Updated

Explanation

Vaginal cancer	
Risk factors	• Age >60 • Human papillomavirus infection • Tobacco use • In utero DES exposure (clear cell adenocarcinoma only)
Clinical features	• Vaginal bleeding • Malodorous vaginal discharge • Irregular vaginal lesion
Diagnosis	• Vaginal biopsy
Management	• Surgery ± chemoradiation

DES = diethylstilbestrol.

This postmenopausal woman has biopsy-confirmed **vaginal squamous cell carcinoma**. Although many women are diagnosed with vaginal cancer on routine screening, those with large, symptomatic lesions often have vaginal bleeding and malodorous vaginal discharge. Additional clinical features that are suggestive of metastatic disease can include pelvic pain, urinary symptoms (eg, hematuria), and bulk symptoms (eg, constipation). Lesions typically appear as an irregular plaque or ulcer in the **upper third of the posterior vagina**, as seen in this patient.

As with cervical cancer, vaginal cancer is due to **persistent human papillomavirus (HPV) infection** with high-risk types 16 and 18. **Chronic tobacco use** decreases the immune response and prevents viral clearing. This increases the risk of persistent HPV infection and thereby allows continued viral replication and eventual **metaplastic changes** within the vaginal squamous cell epithelium. Diagnosis is with biopsy of the lesion to evaluate for depth of invasion and help determine management options.

(Choices A and D) Obesity (BMI ≥30 kg/m^2) and a possible hereditary cancer syndrome (particularly Lynch syndrome) increase the risk of endometrial cancer. Advanced-stage endometrial cancer can present as a vaginal lesion; however, patients would have a concomitant thickened (>4 mm) endometrial stripe. In addition, biopsy for endometrial cancer shows endometrioid adenocarcinoma.

This postmenopausal woman has biopsy-confirmed **vaginal squamous cell carcinoma**. Although many women are diagnosed with vaginal cancer on routine screening, those with large, symptomatic lesions often have vaginal bleeding and malodorous vaginal discharge. Additional clinical features that are suggestive of metastatic disease can include pelvic pain, urinary symptoms (eg, hematuria), and bulk symptoms (eg, constipation). Lesions typically appear as an irregular plaque or ulcer in the **upper third of the posterior vagina**, as seen in this patient.

As with cervical cancer, vaginal cancer is due to **persistent human papillomavirus (HPV) infection** with high-risk types 16 and 18. **Chronic tobacco use** decreases the immune response and prevents viral clearing. This increases the risk of persistent HPV infection and thereby allows continued viral replication and eventual **metaplastic changes** within the vaginal squamous cell epithelium. Diagnosis is with biopsy of the lesion to evaluate for depth of invasion and help determine management options.

(Choices A and D) Obesity (BMI ≥30 kg/m^2) and a possible hereditary cancer syndrome (particularly Lynch syndrome) increase the risk of endometrial cancer. Advanced-stage endometrial cancer can present as a vaginal lesion; however, patients would have a concomitant thickened (>4 mm) endometrial stripe. In addition, biopsy for endometrial cancer shows endometrioid adenocarcinoma.

(Choice C) Diethylstilbestrol was previously used for spontaneous abortion prevention but was discontinued due to multiple adverse effects (eg, infertility due to anatomic defects). Women who were exposed to this medication in utero are at increased risk of vaginal clear cell adenocarcinoma, not squamous cell carcinoma.

(Choice E) Infertility, particularly in patients who are nulliparous despite ovulatory cycles, increases the risk of epithelial ovarian cancer due to recurrent damage and subsequent malignant transformation of the ovarian epithelium from ovulation. Infertility does not increase the risk of vaginal cancer.

(Choice F) Menopause hormone therapy is associated with an increased risk of endometrial cancer in patients who receive estrogen-only therapy and have a uterus and an increased risk of breast cancer. There is no association with vaginal cancer.

Educational objective:
Vaginal squamous cell carcinoma is due to persistent infection with human papillomavirus (HPV) infection high-risk types 16 and 18. Chronic tobacco use decreases the normal immune response, which allows for persistent HPV infection and squamous cell metaplastic changes.

References

- A population-based study of squamous cell vaginal cancer: HPV and cofactors.