

A 47-year-old man comes to the office due to intermittent rectal pain and bleeding. Six months ago, the patient first noticed small amounts of blood on the toilet paper after wiping. He self-treated with laxatives and sitz baths, but the symptoms persisted. The patient was diagnosed with HIV a year ago and does not take antiretroviral medication consistently. He has had receptive anal intercourse in the past but not since these symptoms began. Vital signs are within normal limits. The abdomen is soft and nontender with no organomegaly. Anal examination shows a tender, 3-cm ulcer at the posterior anal verge with an indurated base that bleeds with light palpation. He has no genital lesions or urethral discharge. Two firm, nontender, 3-cm lymph nodes are present in the right groin. Which of the following is the most likely cause of this patient's current condition?

- ☐ A. Anal cancer
- ☐ B. Anal fissure
- ☐ C. Chancroid
- ☐ D. Condylomata acuminata
- ☐ E. Crohn disease
- ☐ F. Fistula-in-ano
- ☐ G. Gonococcal proctitis
- ☐ H. Lymphogranuloma venereum
- ☐ I. Ulcerated hemorrhoid

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- ☒ A. Anal cancer [100%]
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[Proceed to Next Item](#)**Explanation:**

User Id: [REDACTED]

This patient with HIV has several months of anal pain and bleeding with evidence of an anal ulcer and painless lymphadenopathy, suggesting **anal cancer**. Anal cancer develops primarily from squamous epithelial cells due to **human papillomavirus** (HPV) infection. Risk is greatest in men who have **receptive anal intercourse** and those with advanced **HIV** (due to immunosuppression and increased prevalence of multiple HPV serotypes).

Rectal bleeding is the most common manifestation of anal cancer and may be falsely attributed to hemorrhoids if the tumor is located above the anal sphincter, hiding it from view. Patients also commonly have anal pain and/or a sensation of anal pressure. Examination may show a mass or an ulcerated anal lesion; spread via the

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Rectal bleeding is the most common manifestation of anal cancer and may be falsely attributed to hemorrhoids if the tumor is located above the anal sphincter, hiding it from view. Patients also commonly have anal pain and/or a sensation of anal pressure. Examination may show a mass or an ulcerated anal lesion; spread via the lymphatic system may result in **firm, nontender** inguinal or femoral lymphadenopathy. Diagnosis requires a biopsy of the lesion.

(Choice B) Anal fissures can cause pain with bowel movements and a small amount of rectal bleeding. However, lesions typically heal in <6 weeks, and a 3-cm ulcer would be uncommon.

(Choice C) Chancroid is extremely uncommon in developed countries and typically causes ≥ 1 painful genital ulcers with lymphadenitis, not painless lymphadenopathy.

(Choice D) HPV infections are also associated with **condylomata acuminata** (anogenital warts). Manifestations typically include asymptomatic, skin-colored papules or verrucous lesions, not a solitary ulcer. Less than 50% of patients with anal cancer have a history of condylomata acuminata even though HPV is associated with both conditions.

(Choice E) Crohn disease can cause anal fissures, fistulas, abscesses, and stenosis; anal carcinoma is rarely associated with Crohn disease.

(Choice F) Anal fistulas usually arise after anorectal abscess and manifest with chronic purulent drainage and intermittent rectal pain. This patient has an ulcer and no purulent drainage.

(Choice G) Gonococcal proctitis is usually asymptomatic but may cause tenesmus, anorectal pain, and mucopurulent discharge. A single ulcer and 6 months of intermittent bleeding would be atypical.

(Choice H) *Chlamydia trachomatis* can cause lymphogranuloma venereum that manifests with an anogenital ulcer (primary), lymphadenitis (secondary), and fibrosis/strictures of the anogenital tract (tertiary). This patient with 6 months of symptoms, a friable ulcer, and nonpainless lymphadenopathy is more likely to have

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(Choice I) Hemorrhoids can cause painless rectal bleeding and perianal itching; thrombosis may lead to acute (not chronic) pain and ulceration. A 3-cm anal ulcer and firm, nontender lymphadenopathy would be atypical.

Educational objective:

Anal cancer is usually caused by human papillomavirus and occurs most often in men who have receptive anal intercourse and/or HIV infection. Manifestations include anal bleeding, pain, sensation of fullness, and an anal mass or ulcerated lesion.

Media Exhibit

Manifestations of human papillomavirus infection

HPV strains	Presentation
1-4	Skin warts (verruca vulgaris)
6, 11	Genital warts (condylomata acuminata)
16, 18	Cervical, vaginal, vulvar & anal neoplasia

HPV= human papillomavirus.

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Media Exhibit

ma acuminata

