

Cervical Cancer Recurrence in the Colon

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Background

Cervical cancer is the fourth leading cancer worldwide in women. Because it is typically diagnosed at a younger age compared to other major cancer types, it leads to a proportionally greater loss in life-years. Most cancers occur at the squamo-columnar junction. Squamous cell carcinoma accounts for approximately 70% of cervical cancer cases. Treatment options vary depending on the stage at diagnosis and include surgery, radiation, chemotherapy, and immunotherapy. Prognosis is affected by stage, tumor volume, age, performance status, and treatment type.

Local recurrence of cervical cancer is not uncommon. It metastasizes to multiple sites including the lung, liver, bone, and supraclavicular lymph nodes, with rare cases involving the breast, paraspinal muscles and duodenum. Metastatic spread of cancer from extracolonic origin to the colon is uncommon. It occurs very rarely in breast and lung carcinomas (~2%), as well as stomach, prostate, breast, ovarian and melanoma. This is a rare case of a recurrence of cervical cancer that spread to the colon and presented as a sigmoid lesion.

Case Report

Patient is a 57-year-old African-American female with history significant for diabetes and cervical cancer who presented for three days of abdominal pain and hematochezia. She reported that defecation had been associated with fatigue for several months. Her cervical cancer was diagnosed at her first pap smear about 2.5 years prior. She underwent abdominal hysterectomy without chemotherapy or radiation. Due to a lack of resources, she had never undergone previous cancer screening and did not follow up for further monitoring.

On admission, CT of the abdomen and pelvis revealed circumferential thickening of the sigmoid colon with walls measuring up to 1.5 cm and a masslike structure associated to the appendix, with a cystic lesion at the base of the cecum. Colonoscopy showed a malignant appearing, ulcerated, friable stricture. The scope could not be advanced past the transverse colon to the cecal lesion. Pathology from the sigmoid mass revealed dysplastic squamous epithelium with infiltrating nests of neoplastic squamous cells, consistent with squamous cell carcinoma.

She underwent exploratory laparotomy. Surgeons discovered an unresectable right-sided pelvic wall mass, involving the iliac vessels and adhered to the cecum and appendix. A fistula was created instead of re-anastomosing the bowel to prevent and relieve obstruction of the right pelvic tumor while avoiding invasion at a newly created anastomotic site. The sigmoid colon itself was resected. Pathology showed squamous cell carcinoma extending from the serosa, through the muscularis propria, into the colonic mucosa. This suggested direct extension of previously squamous cell cervical carcinoma. Lymph node biopsies did not reveal evidence of metastases. Patient was discharged and is now undergoing outpatient chemotherapy.

Discussion

Cervical cancer is a leading cancer in the United States and worldwide. In recent years, incidence has decreased in large part due to the HPV vaccine, but it continues to be a leading cause of mortality worldwide. It is typically squamous in origin. It spreads via direct local or extension and lymphatic dissemination, usually to adjacent organs including the vagina, peritoneum, bladder, and paracervical tissue. The absence of lymphatic involvement in this case points toward direct extension. In advanced disease, distant metastases can occur, most commonly in the lung and para-aortic lymph nodes. Metastases to the small intestine and colon are uncommon, but a few have been reported in the literature. Spread to the sigmoid colon is especially rare, perhaps due to the relatively short segment.

Differentiating between primary colorectal cancer and metastatic disease to the colon is integral, as metastatic disease carries a worse prognosis. Colorectal cancer is most commonly adenocarcinoma; squamous metaplasia in the colon should prompt concern from spread or metastases from another site. There are no guidelines on treating cervical metastases to the colon as cases have been rare, but the most typical approach is surgical resection followed by radiation and chemotherapy. Early detection is key, as tumor resection can limit further spread and prevent additional complications such as bowel obstruction or perforation.

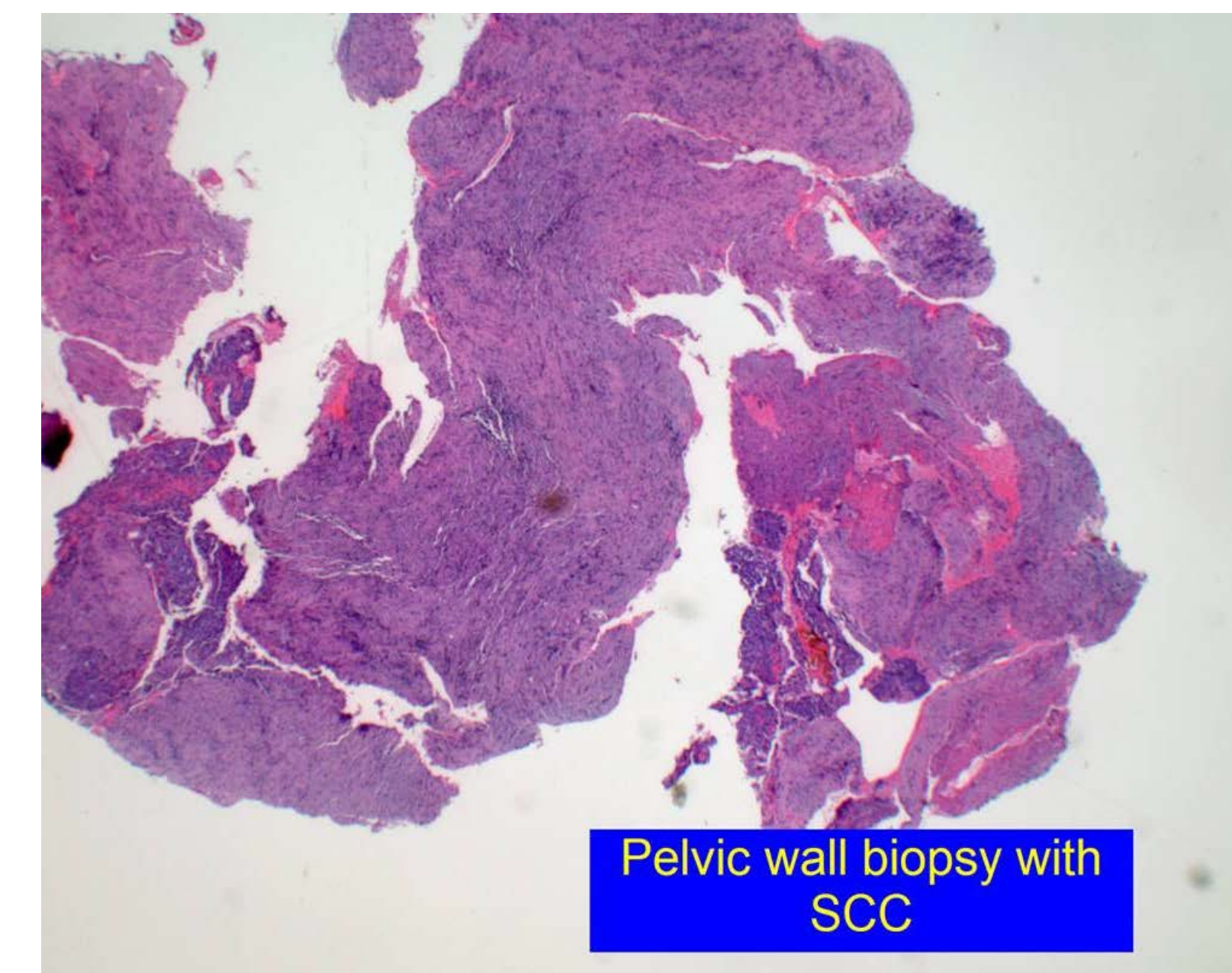
Access to cervical cancer screening, treatment, and monitoring is crucial in limiting incidence and mortality. Significant reductions in cervical cancer have occurred since the implementation of HPV vaccination. Current guidelines recommend testing all women aged 21-65 every 3 years via cytology (Pap smear), or a combination of cytology and HPV testing every five years. Regular screening has been shown to reduce incidence and mortality by 80%. Median recurrence ranges from 7-36 months after treatment, with median survival of 7-17 months after recurrence, prompting the necessity of follow-up visits. These typically should occur every 3 months for two years, every 6 months for three years, then annually.

In the last fifteen years concurrent chemotherapy and radiation (CCRT) in addition to resection has become the new standard of care. Neoadjuvant chemotherapy plus radical surgery can improve overall survival as well as parametrial infiltration compared to surgery alone. However, fewer than half of patients receive all three treatment modalities—surgery, radiation/brachytherapy, and chemotherapy. Incomplete treatment is associated with worse outcomes. Patients with lower odds of receiving high quality care included having public insurance as compared to private, and treatment at a lower-volume center. Black women with locally advanced cervical cancer are less likely to receive brachytherapy, leading to a racial disparity in survival rates. Care nonadherent to national guidelines is associated with increased mortality in black patients and patients with Medicaid, and more common in those with lower socioeconomic status. Decreased access to screening, guideline-derived treatment methodologies and follow-up makes certain populations disproportionately impacted by cervical cancer, which otherwise could be more readily diagnosed and treated.

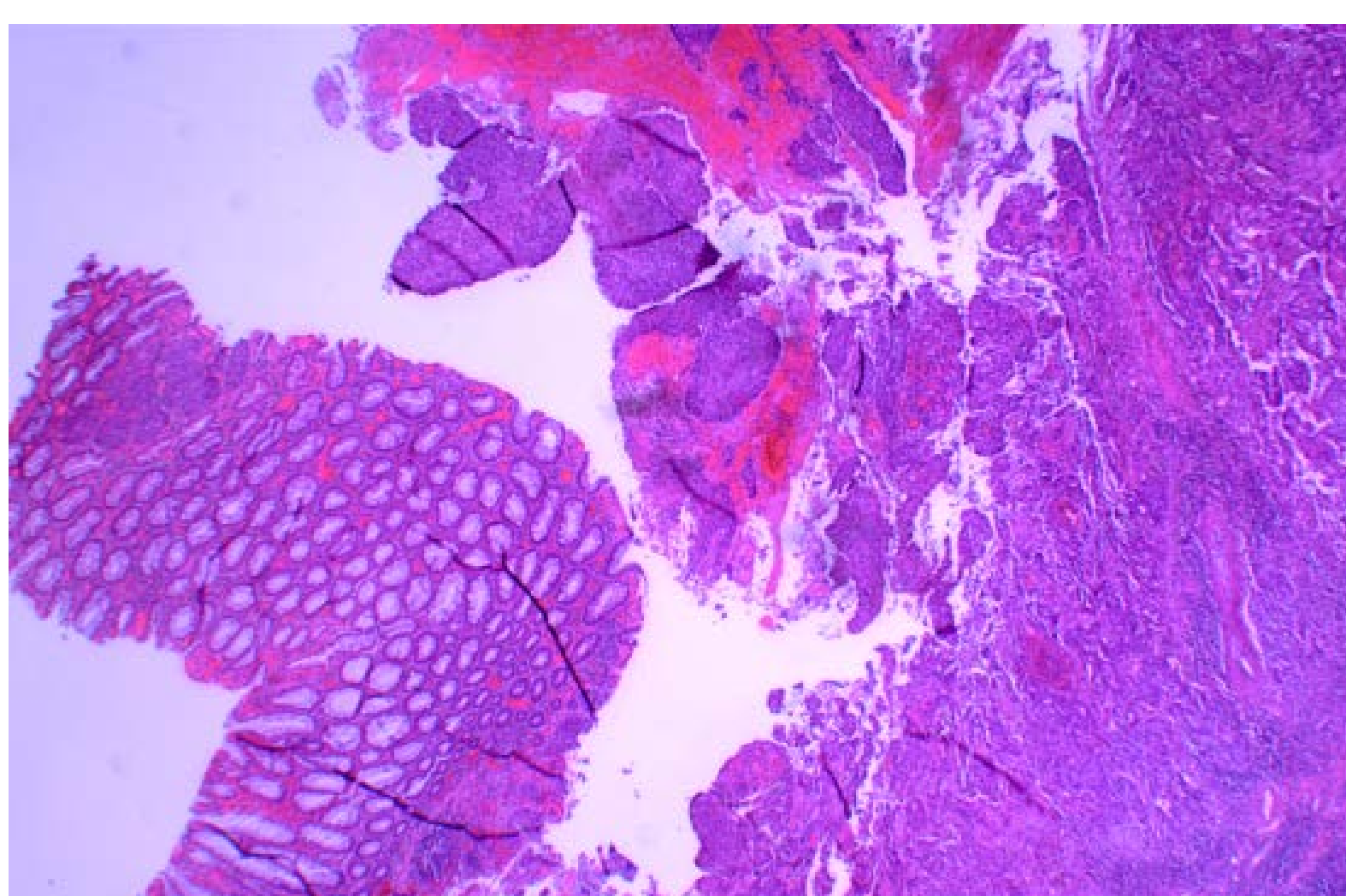
Images



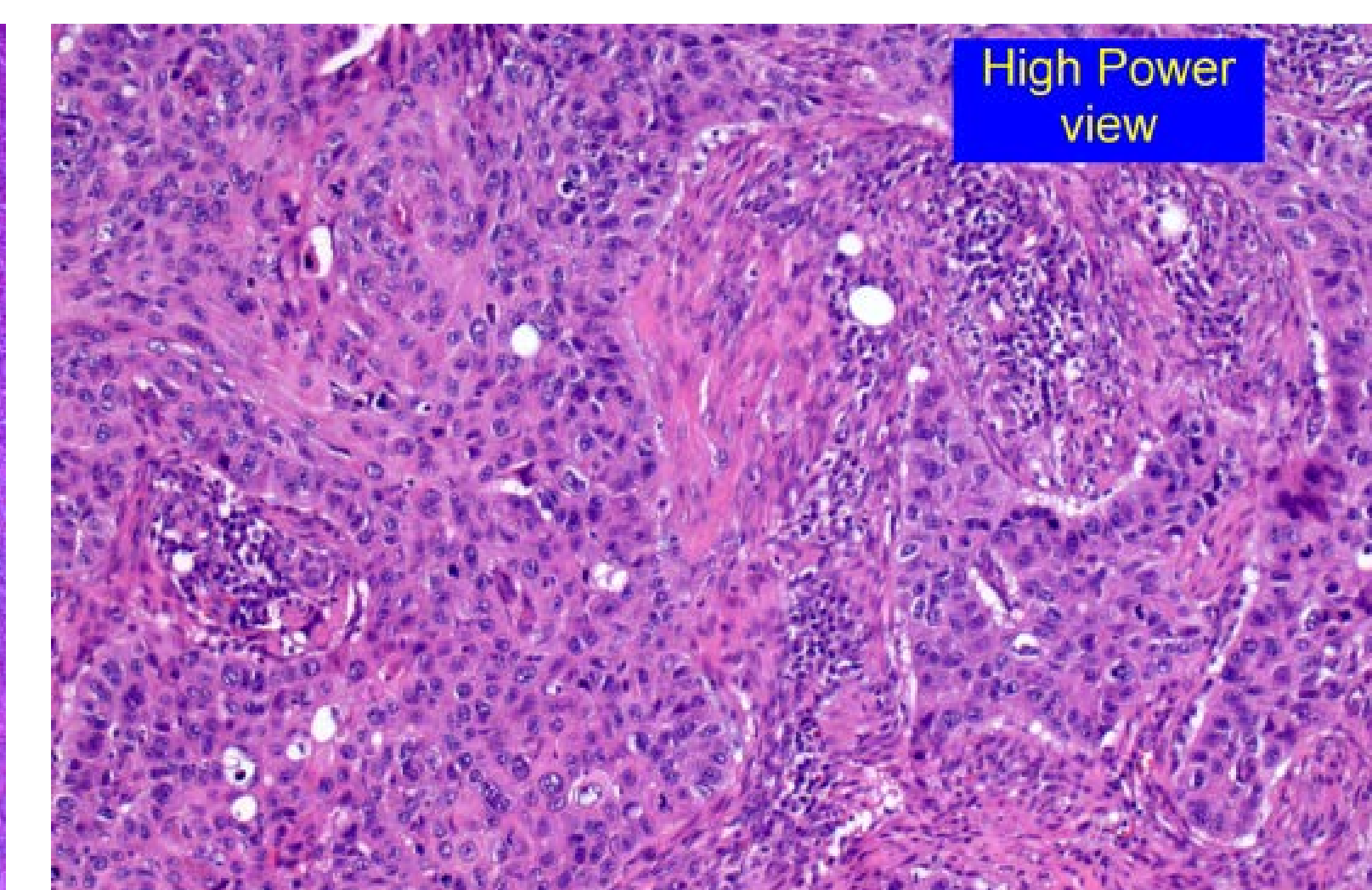
Initial CT revealed mass at the base of the cecum.



Biopsy of the pelvic wall mass showed squamous cell carcinoma.



Sigmoid colon biopsy: squamous cell carcinoma from the serosa through muscularis into the colonic mucosa, favoring direct extension.



High power view: squamous cell carcinoma in the sigmoid colon. Classified pT4 stage IV, spreading to adjacent organs, pelvic wall

Conclusion

Cervical cancer spreading to the colon is rare, but should be suspected in patients with squamous metaplasia in the colon and a history of cervical malignancy. Early detection can prevent further spread and complications. Disparity in access to testing and treatment leads to a higher incidence and mortality in certain at-risk groups.

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This research was supported (in whole or in part) by HCA and/or an HCA affiliated entity. The views expressed in this publication represent those of the author(s) do not necessarily represent the official views of HCA or any of its affiliated entities.