

# A Case of Esophageal Squamous Cell Carcinoma Metastasized to the Colonic Anastomotic Site of Right Hemicolectomy

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## ABSTRACT

A 73-year-old woman with a history of right hemicolectomy for advanced ascending colon cancer 14 years earlier was referred to our facility for a 2-month history of solid food dysphagia. An esophagogastroduodenoscopy revealed a 7-cm fungating and ulcerated mass in the middle to lower esophagus. The biopsy from the esophageal mass showed a moderately to poorly differentiated squamous cell carcinoma. A colonoscopy showed an end-to-end ileocolonic anastomosis with a 7-mm ulceration in the transverse colon. The biopsy of the ulceration at the anastomotic site showed a moderately to poorly differentiated squamous cell carcinoma with a morphology similar to that of the esophageal mass, rendering the diagnosis of metastatic esophageal squamous cell carcinoma. Colonic metastasis from esophageal squamous cell carcinoma, especially at the anastomotic site, is extremely rare. Although surgical trauma may not have contributed to the anastomotic site metastasis, given the distant timeline, its role in the pathogenesis of metastasis cannot be completely ruled out.

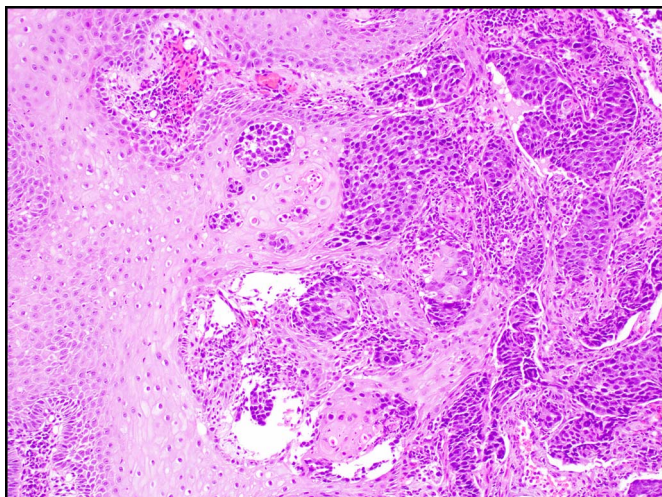
## INTRODUCTION

Advanced squamous cell carcinoma of the esophagus may invade surrounding structures including the trachea, lung, aorta, mediastinum, pericardium, and stomach. Metastases to distant organs are frequently seen, particularly to the liver, lungs, bones, and brain.<sup>1</sup> Although squamous cell carcinoma of the esophagus rarely metastasizes to the uncommon sites,<sup>2</sup> colonic metastasis from squamous cell carcinoma of the esophagus is extremely rare with 5 previous case reports.<sup>3-7</sup> To our knowledge, this is the first case report of colonic metastasis from squamous cell carcinoma of the esophagus to an anastomotic site of the colon.

## CASE REPORT

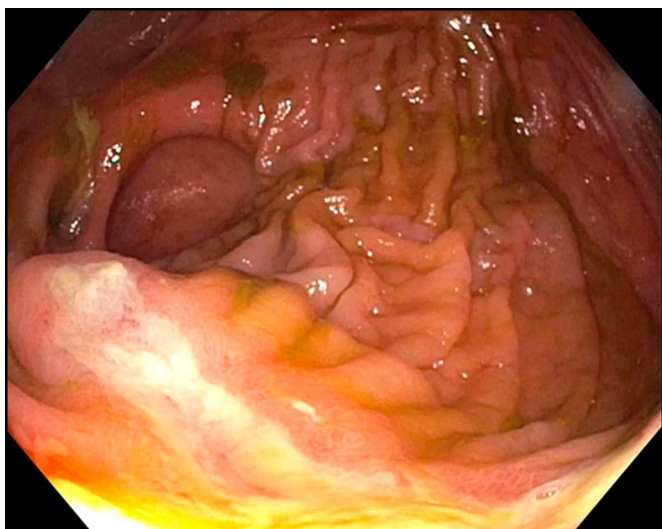
A 73-year-old woman with a history of obesity, osteoarthritis, basal cell carcinoma of the skin, and right hemicolectomy for advanced ascending colon cancer was referred to our facility for a 2-month history of solid food dysphagia. The patient has never smoked tobacco and drinks a couple of alcoholic beverages every day. She underwent a right hemicolectomy for advanced ascending colon cancer followed by FOLFOX adjuvant chemotherapy at an outside facility in 2006. She was well for almost 2 years until 2007 when she presented with an abdominal wall recurrence. She was taken for resection of the abdominal wall recurrence and complex closure.

The patient has been followed up in the survivorship clinic for surveillance with no evidence of recurrence for 13 years to date. The patient presented with new symptoms of dysphagia, dyspepsia, frequent bloating, and weight loss. She noticed dysphagia after eating solid foods when she felt like it got stuck in the middle of her chest. She stated that she had lost 10 pounds over the past 2 months. An esophagogastroduodenoscopy revealed a 7-cm fungating and ulcerated mass in the middle to lower esophagus. The mass was partially obstructing the lumen. No other abnormalities were found in the esophagus, stomach, and duodenum. The biopsy from the esophageal mass showed a moderately to poorly differentiated squamous cell carcinoma (Figure 1).

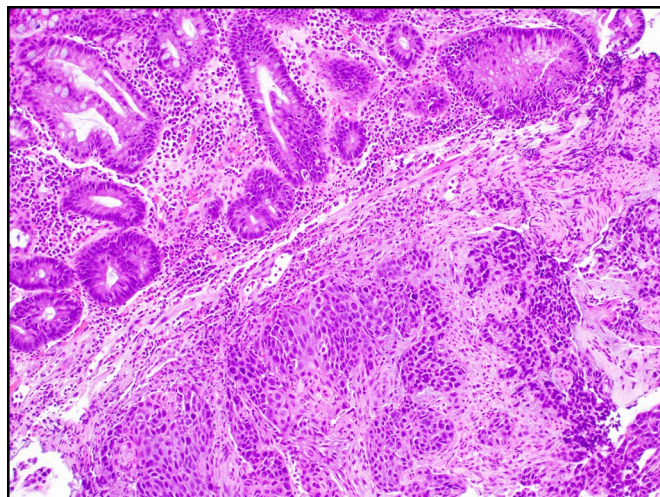


**Figure 1.** The biopsy from the esophageal mass showed a moderately to poorly differentiated squamous cell carcinoma.

A colonoscopy showed an end-to-end ileocolonic anastomosis with a 7-mm ulceration in the transverse colon (Figure 2). No other ulceration, mass, or polyp was found in the entire colon. The biopsy from the ulceration at the anastomotic site showed a moderately to poorly differentiated squamous cell carcinoma (Figure 3). No recurrent colonic adenocarcinoma was identified. Immunostains performed on both esophageal and colonic biopsies demonstrate that the tumor cells in both esophageal and colonic biopsies are positive for p40, p63, and p16 and negative for CK7, CK20, and CDX2 (Figure 4). The diagnosis of metastatic esophageal squamous cell carcinoma to the colonic anastomotic site of previous right hemicolectomy was rendered based on the morphology and immunoprofile. A subsequent computed tomography and positron emission tomography demonstrated no other distant metastases. Chemotherapy with 5-FU and oxaliplatin has been started.



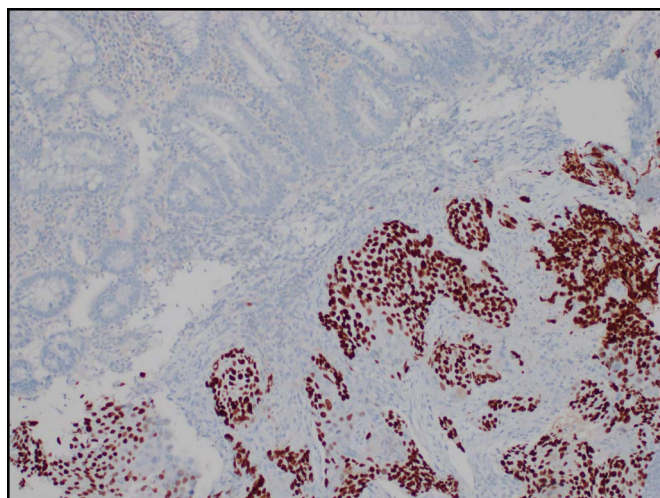
**Figure 2.** A 7-mm ulceration at the end-to-end ileocolonic anastomosis in the transverse colon.



**Figure 3.** The biopsy from the ulceration at the anastomotic site showed a moderately to poorly differentiated squamous cell carcinoma, consistent with metastatic esophageal squamous cell carcinoma.

## DISCUSSION

Patients with esophageal squamous cell carcinoma often present with advanced disease. Metastases to distant organs are frequently seen, particularly to the liver, lungs, bones, and brain.<sup>1</sup> Although squamous cell carcinoma of the esophagus rarely metastasizes to the uncommon sites,<sup>2</sup> colonic metastasis from squamous cell carcinoma of the esophagus is extremely rare with 5 previous case reports.<sup>3-7</sup> There has been no case report of colonic metastasis from squamous cell carcinoma of the esophagus to the anastomotic site of previous right hemicolectomy. We report the first case of colonic metastasis from squamous cell carcinoma of the esophagus to the anastomotic site of previous right hemicolectomy. Both esophageal and colonic biopsies demonstrate a moderately to poorly differentiated squamous cell carcinoma with similar morphology and immunoprofile. The diagnosis of metastatic esophageal squamous



**Figure 4.** The tumor cells in the colonic biopsy are diffusely positive for p40. No adenocarcinoma component is seen.

cell carcinoma to the colonic anastomotic site of previous right hemicolectomy was rendered based on the morphology and immunoprofile. Among 5 previous case reports of colonic metastasis from squamous cell carcinoma of the esophagus, 3 of the 5 cases presented with synchronous lesions.<sup>3-5</sup> Two cases affected the transverse colon, 2 cases affected the rectosigmoid colon, and 1 case affected the ascending colon.<sup>3-7</sup> All 4 patients except 1 patient with no follow-up information died of esophageal squamous cell carcinoma within 1 year from the diagnosis of colonic metastasis. Our patient presented with synchronous lesion at the anastomotic site in the transverse colon. The patient has recently started chemotherapy.

A metastasis to the anastomotic site is extremely rare.<sup>8</sup> However, the anastomotic site might be a good niche for cancer cells to metastasize to. Our patient underwent right hemicolectomy for advanced ascending colon cancer at an outside facility in 2006. The biopsy from the ulceration at the anastomotic site showed a moderately to poorly differentiated squamous cell carcinoma, consistent with metastatic squamous cell carcinoma of the esophagus. The pathogenesis of a metastasis to the anastomotic site remains unknown. The previous experimental study demonstrated that intracardiac injection of tumor cells never induced tumor growth in normal bowel, consistent with the clinical observation that the large intestine is a rare organ for bloodborne metastasis from primary tumor elsewhere in the body.<sup>9</sup> However, tumor growth/metastasis occurred at the site of colonic anastomosis if surgery preceded tumor injection.<sup>9</sup> Although the results of this previous experimental study suggest that trauma to a tissue might support growth of tumor, surgical trauma in our case might not be a contributing factor for a metastasis to the anastomotic site as the surgery was 14 years earlier. Our case is intriguing because a metastasis occurred at the anastomosis site, and no other metastasis was found.

In summary, we have reported the first case of metastatic esophageal squamous cell carcinoma to the colonic anastomotic site of previous right hemicolectomy in a 73-year-old woman. Although the pathogenesis of a metastasis to the anastomotic site remains unknown, the possibility of contribution of surgical trauma to metastasis formation at the ileocolonic anastomosis cannot be completely ruled out.

## DISCLOSURES

Author contributions: Y. Zhang wrote the manuscript. A. Dam edited the manuscript. Y. Nakanishi revised the manuscript for intellectual content and is the author guarantor.

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Informed consent was obtained for this case report.

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## REFERENCES

1. Nakanishi Y. Pathology of esophageal squamous cell carcinoma. In: Ando Y (ed). *Esophageal Squamous Cell Carcinoma* 2nd ed. Springer: Tokyo, 2020.
2. Shaheen O, Ghibour A, Alsaid B. Esophageal cancer metastases to unexpected sites: A systemic review. *Gastroenterol Res Pract* 2017;2017:1657310.
3. Karwasra RK, Garg P, Godara R, Yadav V. Colonic metastasis from squamous cell carcinoma of esophagus. *Indian J Gastroenterol* 2002;21(5):207.
4. Iwase H, Indo T, Shimada M, et al. Esophageal cancer with colonic metastasis successfully treated by chemoradiotherapy followed by chemotherapy with S-1 and cisplatin. *Int J Clin Oncol* 2004;9(5):398-402.
5. Shimada Y, Okumura T, Hojo S, et al. Synchronous asymptomatic colonic metastasis from primary esophageal squamous cell carcinoma. *J Surg Case Rep* 2014;2014(1):117-21.
6. Garg N, Stoehr C, Zhao YS, Rojas H, Hsueh CT. Metastatic squamous cell carcinoma of colon from esophageal cancer. *Exp Hematol Oncol* 2017;6:11-5.
7. Wiseman D, Ferri L, Lakatos PL, Fiset PO, Bessissow T. Esophageal squamous cell carcinoma with colonic metastases. *ACG Case Rep J* 2020;7(2):e335-8.
8. Lin HC, Yu CP, Lin HA, Lee HS. A case of lung cancer metastasized to the gastrointestinal anastomosis site where the primary gastric cancer was resected 17 years ago. *Lung Cancer* 2011;72:255-7.
9. Skipper D, Jeffrey MJ, Cooper AJ, Taylor I, Alexander P. Preferential growth of blood borne cancer cells in colonic anastomoses. *Br J Cancer* 1988;57(6):564-8.

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