



# Do Amelanotic Melanomas Have a Higher Propensity to Metastasize to the Stomach?



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(The authors have no conflicts of interest as it relates to the content of this abstract)

## Introduction

- Melanoma is a highly lethal malignant form of cutaneous cancer, if not diagnosed in early stages, and accounts for approximately 75% of deaths related to skin cancer.
- Subtypes with distal metastases have demonstrated the highest rate of recurrence and mortality, which conferred poor prognoses.
- Metastatic melanoma involving the gastrointestinal tract is rare; however, when it occurs, the most common sites are small bowel (51-71%), gastric (27%), and colon (22%).
- Previous studies demonstrated that amelanocytic melanoma comprised only 9.8% of invasive melanomas, which typically affected the face, ears, neck, and extremities, and conferred a worse prognosis.
- However, amelanocytic melanomas account for approximately 2% of all metastatic cases, which are particularly challenging to identify and diagnose when presenting as metastases.
- Gastrointestinal metastases of malignant melanomas are frequently misdiagnosed due to both lack of specific clinical specifications in addition to the rare amelanotic appearance in some cases.

## Objective

This study investigates the incidence of malignant melanoma with gastric metastases and associated histopathological features at the University of Missouri-Columbia between 2000 and 2020.

## Methods

- A retrospective review of patient records between 2000 and 2020 was performed.
- After identifying cases, further investigation was performed to evaluate morphology, characteristic microscopic features, average age of diagnosis, and average duration between identification of primary melanoma and gastric metastasis.

## Results

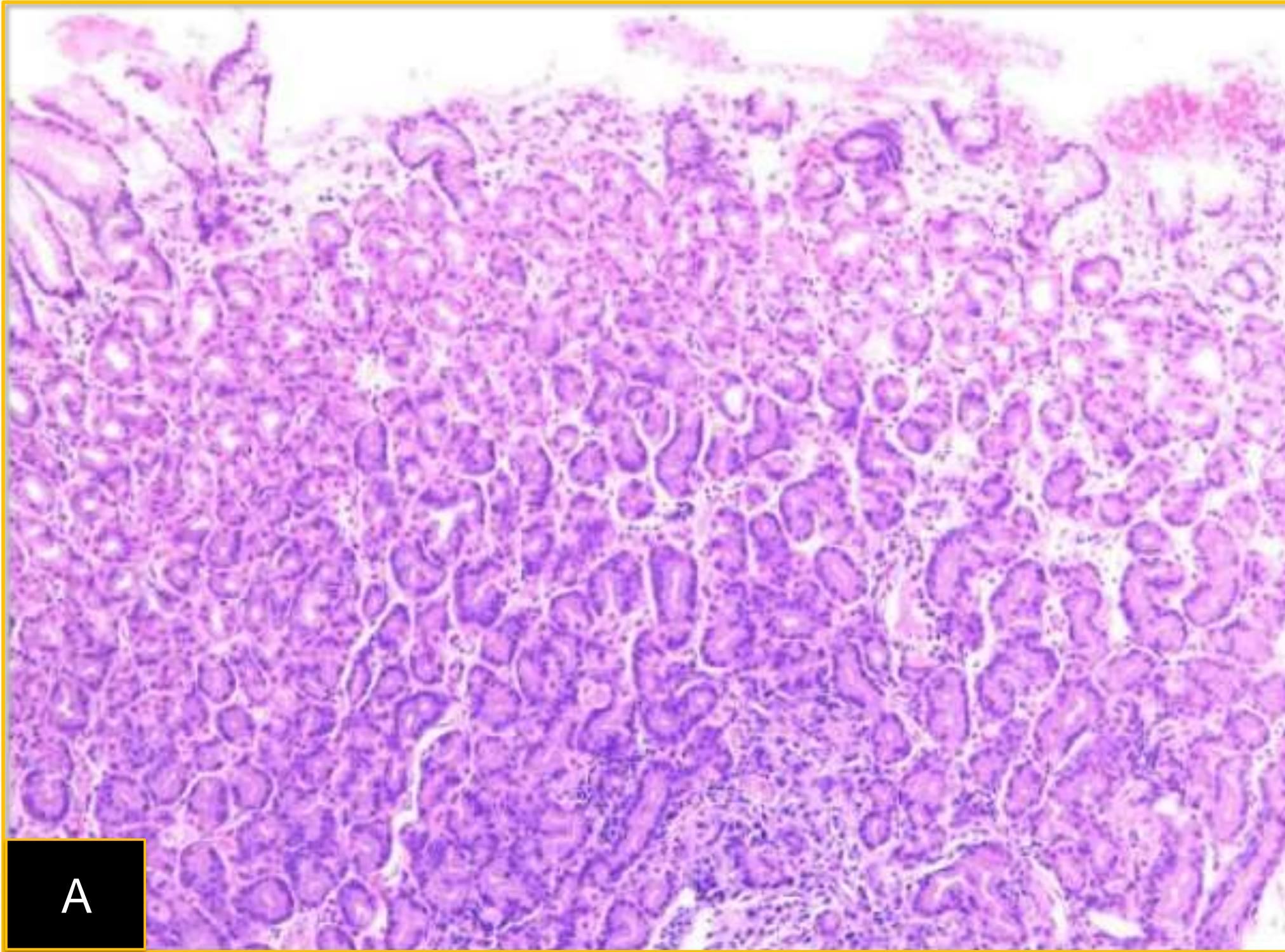


Figure A. Focus of gastric ulceration.

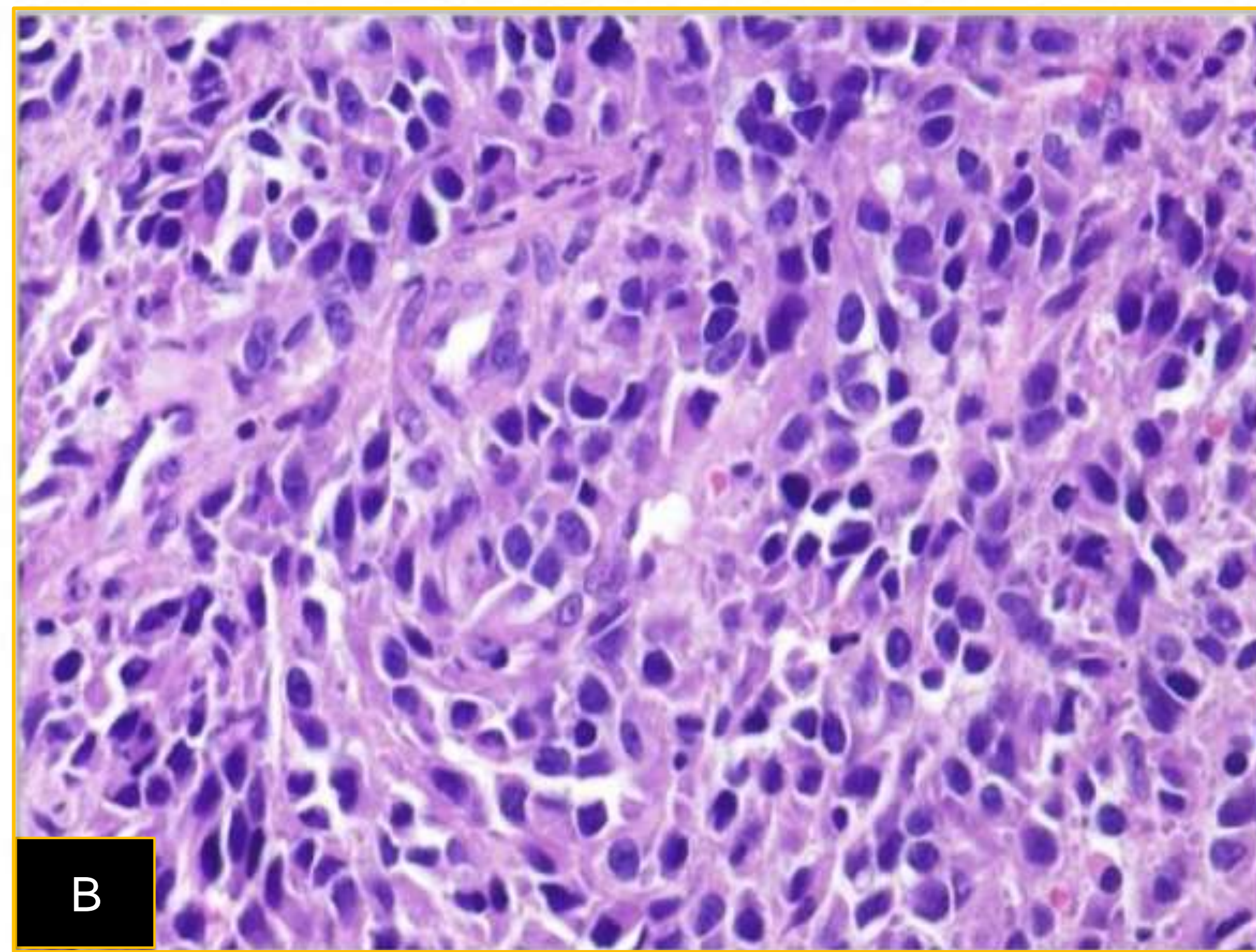


Figure B. H&E section of amelanotic melanoma presenting in the stomach.

Age	66-year-old	64-year-old	77-year-old	66-year-old	63-year-old	66-year-old	64-year-old
Race	White	White	White	White	White	White	White
Sex	Male	Female	Male	Male	Male	Female	Male
Time from primary diagnosis to metastasis	Initial diagnosis	Initial diagnosis	19 months; primary lesion on left flank	62 months; primary lesion on right ear	6 months; primary lesion left superior parotid	2 months	1 month
Location	Gastric body	Greater curvature & cardia	Gastric polyp	Gastric polyp	Stomach	Stomach	Stomach
Type	Epithelioid	Epithelioid	Epithelioid	Mixed	Spindle	Epithelioid	Epithelioid
Characteristic features	Melanocytic, distinct mass lesion, ulceration, & polyp	Amelanocytic, diffuse infiltrative lesion, ulceration	Amelanocytic, diffuse infiltrative lesion, no ulceration	Melanocytic, distinct mass lesion, ulceration	Amelanocytic, distinct mass lesion, ulceration	Amelanocytic, diffuse infiltrative lesion, ulceration	Melanocytic, diffuse infiltrative lesion, ulceration
Other metastatic locations	Brain, lung, mediastinum	None	Brain, left lower back	None	Liver & peri-portal lymph node	Cervical prevertebral soft tissue, mediastinum, pancreas	Brain, duodenum, celiac lymph node, subcarinal lymph node

## Discussion

- The average time between initial diagnosis of melanoma and gastric metastasis was 12.8 months. Of note, two of the seven patients presented with metastatic melanoma to the stomach with unknown primaries.
- Interestingly, 86% (6/7) of the cases presented with gastric ulceration (See Figure A).
- Various morphologies were identified including epithelioid (71%), spindle (14%), and mixed epithelioid and spindle (14%).
- Lastly, 57% of the tumors presented with a diffuse, infiltrative pattern, while 43% presented as distinct mass lesions.

## Conclusion

Although gastric metastasis mostly appears to be a late event in the course of metastatic melanoma, it can rarely be the initial presentation as evidenced in two of our cases.

Amelanocytic melanoma presents an especially challenging scenario in the evaluation of metastatic disease to the stomach.

Thus, there should be high suspicion for this entity when evaluating gastric specimens for metastatic disease.

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