

### Cancer precursor lesions project

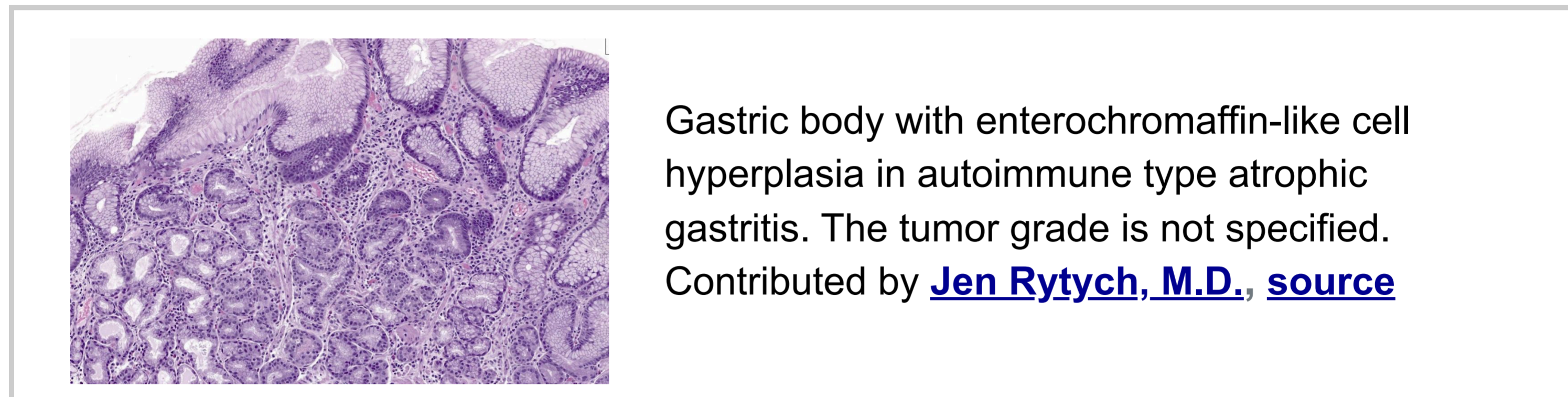
Do you have expertise in particular malignancies? If so, we invite you to review our new Cancer precursor [spreadsheet](#) of all distinct human cancers (1,231 as of 3 Apr 24) and their identifiable precursors (192 as of 3 Apr 24) to advise

- What malignant diagnoses should be added or removed from this spreadsheet?
- What precursor lesions should be added or changed for any of the diagnoses listed?
- Are some diagnoses duplicative because they are essentially the same within or at different sites?

Please email proposed updates to [Nat@PathologyOutlines.com](mailto:Nat@PathologyOutlines.com). An overview of the project with additional information is available [here](#). Our goal is to identify precursor lesions for all malignancies to better understand and treat cancer and reduce its **600,000 annual U.S. deaths**. Studying known precursors and their patterns of molecular expression may suggest molecular patterns for tumors with unknown precursors ([Pernick 2018](#)).

### Neuroendocrine tumors

Our first essay discusses malignancies and their precursor lesions based on our new [Cancer Precursor Project](#). This essay examines data compiled by our project on neuroendocrine tumors and summarizes current knowledge about precursor lesions in the stomach (enterochromaffin-like cell hyperplasia) and lung (DIPNECH). You can read the full essay [here](#).



Gastric body with enterochromaffin-like cell hyperplasia in autoimmune type atrophic gastritis. The tumor grade is not specified. Contributed by [Jen Rytych, M.D.](#), [source](#)

### Premalignant precursors for glioblastoma

We propose that the premalignant precursors may be relatively stable based on the [attractor concept](#) and have distinctive molecular patterns that may or may not be identifiable histologically ([Pernick 2018](#)).

[Glioblastoma, IDH wild type](#) is the most common primary brain tumor in adults (“primary” in this context means not representing metastatic disease). It accounts for 14% of all primary central nervous system (CNS) tumors and 49% of all malignant CNS tumors in adults ([Ostrom 2021](#)).

Although we believe that most malignancies have a premalignant precursor lesion, to our knowledge, none has been identified for primary glioblastoma or any primary CNS tumor.

What might a glioblastoma premalignant precursor look like? We suggest it may have “milder” features of glioblastoma but in a nonmalignant context.

More information and the full essay can be found [here](#).



Glioblastoma (2007), but no molecular testing was done, [source](#)

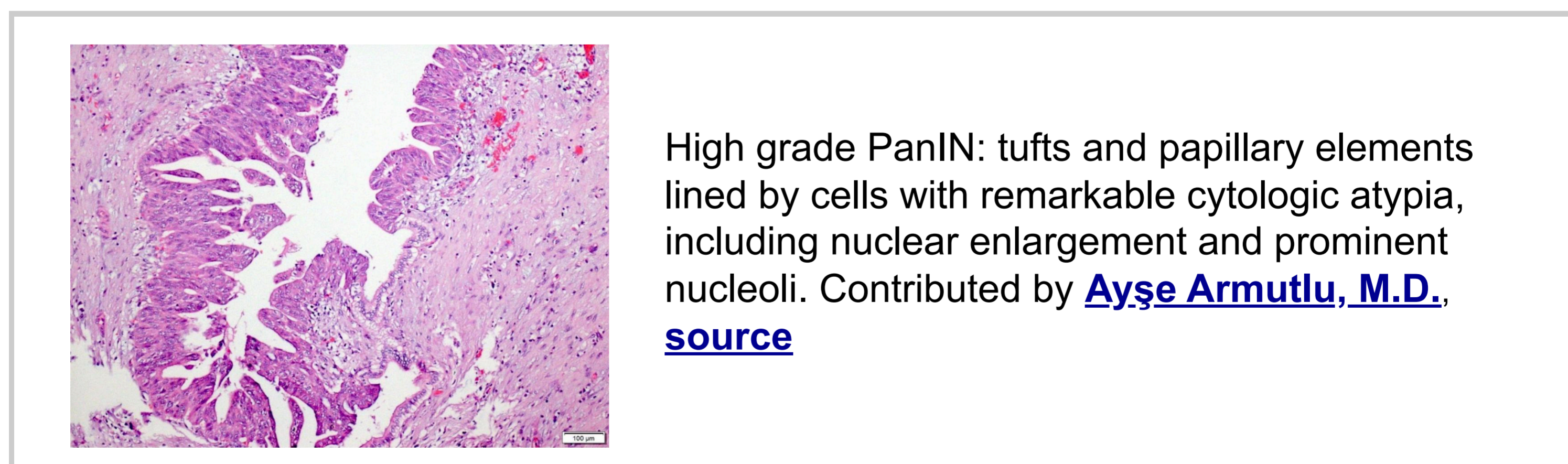
### Characteristics of premalignant precursors, part 1

Although premalignant precursors have been identified for 15.6% of distinct malignancies, the percentage varies widely by pathology subspecialty, from 1.8% to neuropathology (brain / eye) to 41.3% for thoracic (lung, heart, mediastinum).

We believe that studying these precursor lesions will help identify existing, but currently unknown cancer precursors, such as in the CNS (central nervous system or brain) and soft tissue.

This essay gives examples of precursors for carcinomas of the pancreas and lung and lists common precursors at other epithelial sites.

More information and the full essay can be found [here](#).



High grade PanIN: tufts and papillary elements lined by cells with remarkable cytologic atypia, including nuclear enlargement and prominent nucleoli. Contributed by [Ayşe Armutlu, M.D.](#), [source](#)

#### Social media

Follow us on [LinkedIn](#) and [Twitter](#). Twice a week we post interesting cancer related images of malignancies with diagnoses.

#### Newsletters

Click [here](#) to sign up for this newsletter. We list our prior newsletters on the [Newsletters page](#) as well as below.

#### Latest versions of our documents

- [Strategic plan](#) (updated 1 June 2023)
- [American Code Against Cancer](#) (updated 9 January 2023)

#### Archives

- [February 2024](#)
- [December 2023](#)
- [October 2023](#)
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