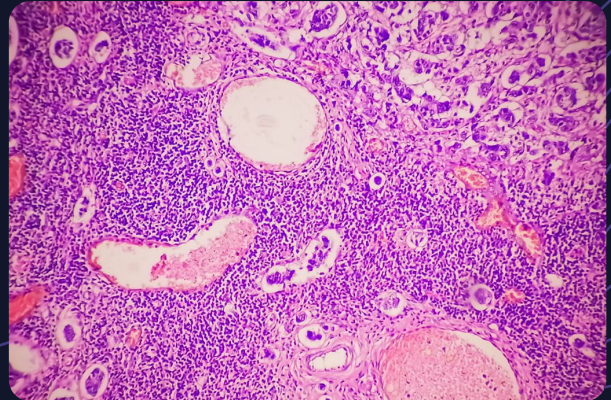


AI-enabled cell feature detection in breast cancer tissue

How Paige improved their model's
F1 score from .6 to .83 with data
annotations from Centaur Labs



OVERVIEW

Paige is a global leader in end-to-end digital pathology solutions and clinical AI applications, and was the first company to receive FDA approval for an AI product in digital pathology. Their newest product – the Paige Breast Suite – assists pathologists with efficiency and error reduction by identifying suspicious regions of interest.

CHALLENGE

- Developing ML models to identify key cellular features within breast cancer tissue
- Unscalable annotation system – 4 staff pathologists doing annotation after hours, using prototyped internal tool; Produced 3–4 reads per case; high effort, low throughput
- Needed 20K+ images from pathology slides of breast tissue classified

SOLUTION

- Classified if a cellular feature of interest was or was not present in 20K images
- Centaur Labs generated 20K annotations, at a rate of 4,000 annotations per week, with 10 qualified opinions per image
- 90% agreement with Gold Standard cases, exceeding the quality benchmark of 47%

IMPACT

✓ Improved model's F1 score from **.6 to .78** with data annotations provided by Centaur Labs

✓ **10 times faster** annotation, saving time for AI team and staff pathologists

"Working with Centaur Labs is the best way to get thousands of pieces of data annotated in a day, rather than weeks. With Centaur Labs we have both an army of people doing high quality annotations, and annotating the data very quickly."

Fausto Milletari
Sr. AI Scientist at Paige

