

# Automation in Histopathology

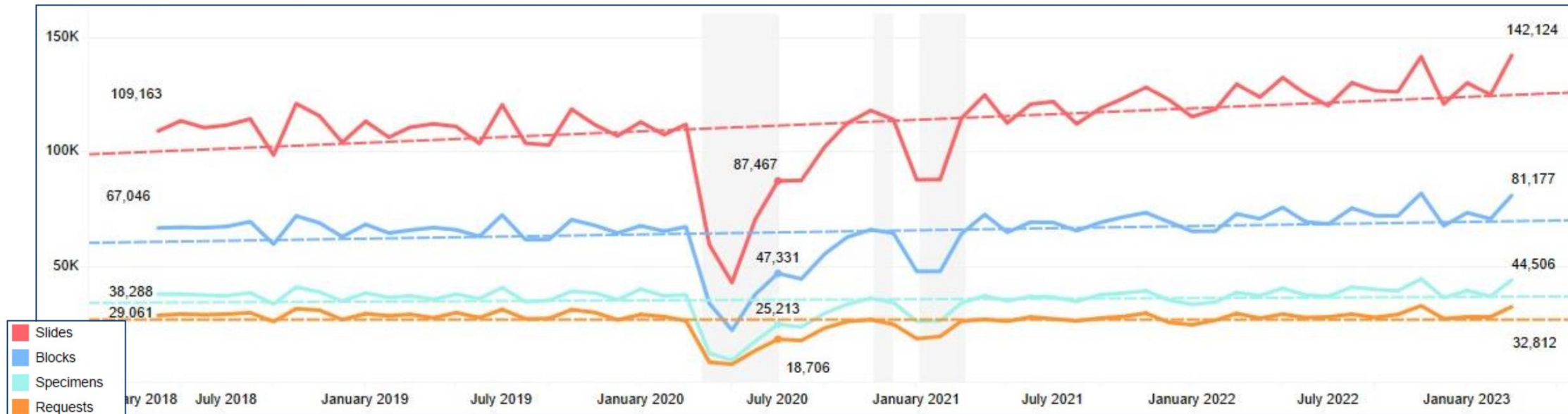
**Michael Eden**  
Histopathology Clinical Lead

**Together**  
**Safe**  
**Kind**  
**Excellent**

## Why do we need to work with industry?

1. Workload is increasing (over 25% from pre pandemic levels), Increase is in amount and complexity (e.g. Genomics and Immunohistochemistry)
2. There is a local, national, and international staff shortage
3. It is not possible to meet the demands of the service
4. The current process is 150 years old
5. The process is not scalable
6. The system is inherently unsafe due to the potential for sample mix ups and crossovers.

# Increased Activity



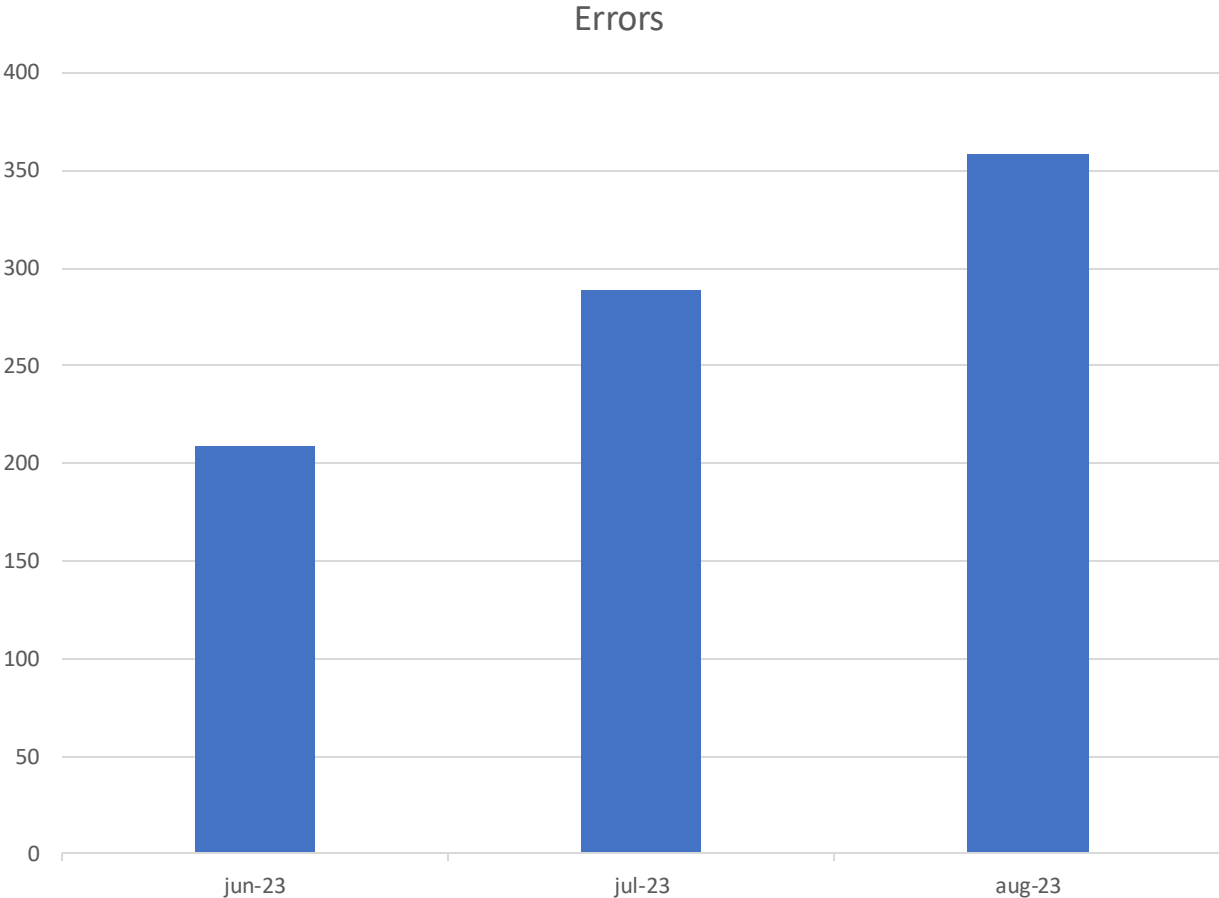
## Facts and Figures (change between 2018/19 and 2022/23)

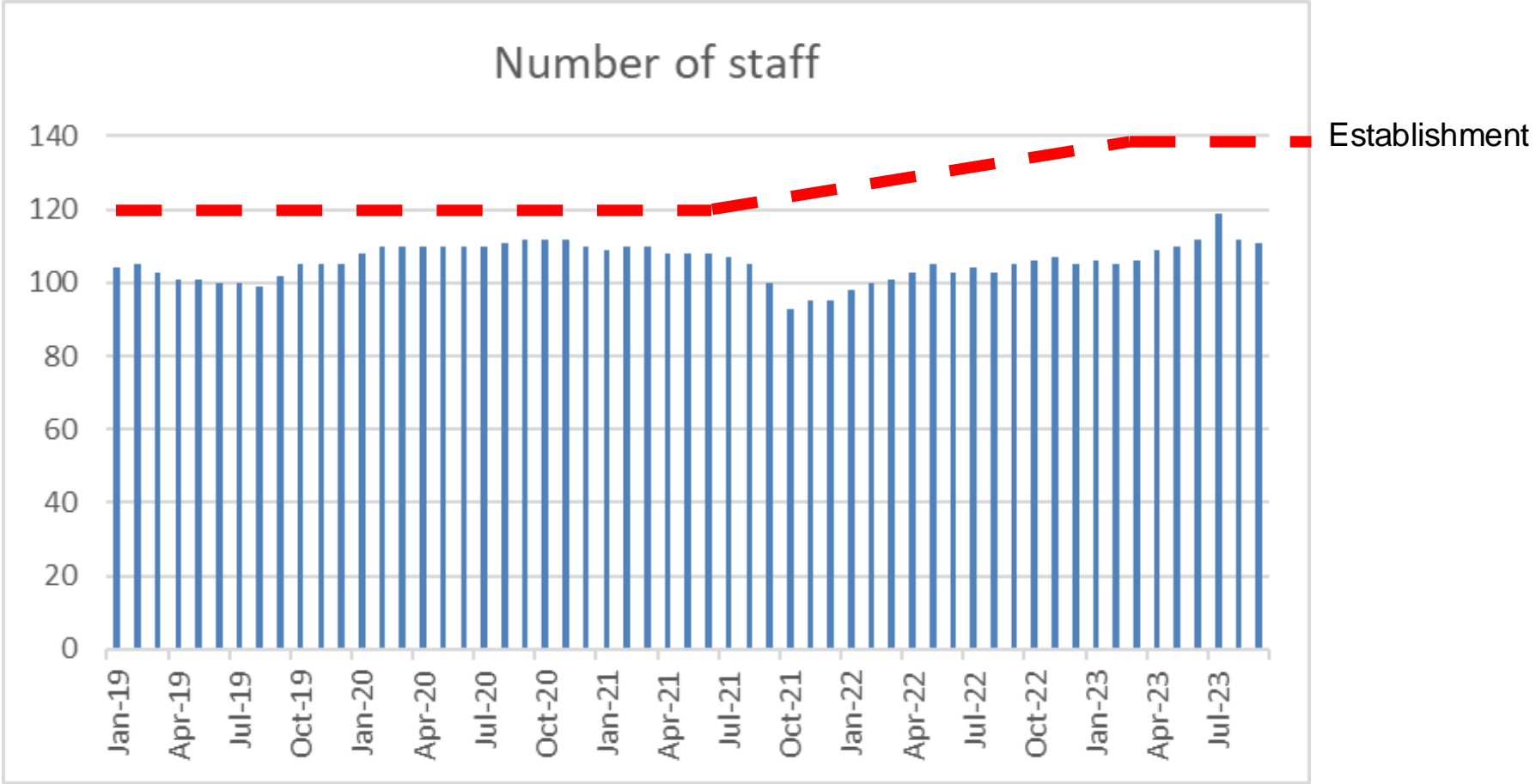
- 20% more slides and 14% more requests.
- 27% more slides produced for each cancer/urgent request.
- Increased activity per 100k population.
- Increase from 1,279 to 30,396 outsourced cases.
- 7% increase in slides between 21/22 and 22/23.

## Key Messages

- Volume of work has increased significantly.
- The growth in volume is higher than growth in population .
- Complexity is increasing, with each request generating more work within the laboratory.

# Error rates are increasing





1920

2020

The process is old



Biochemistry



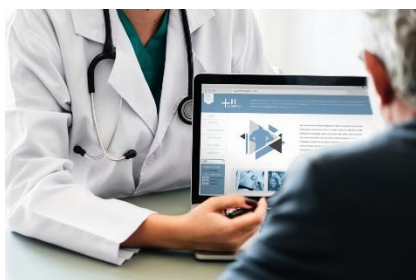
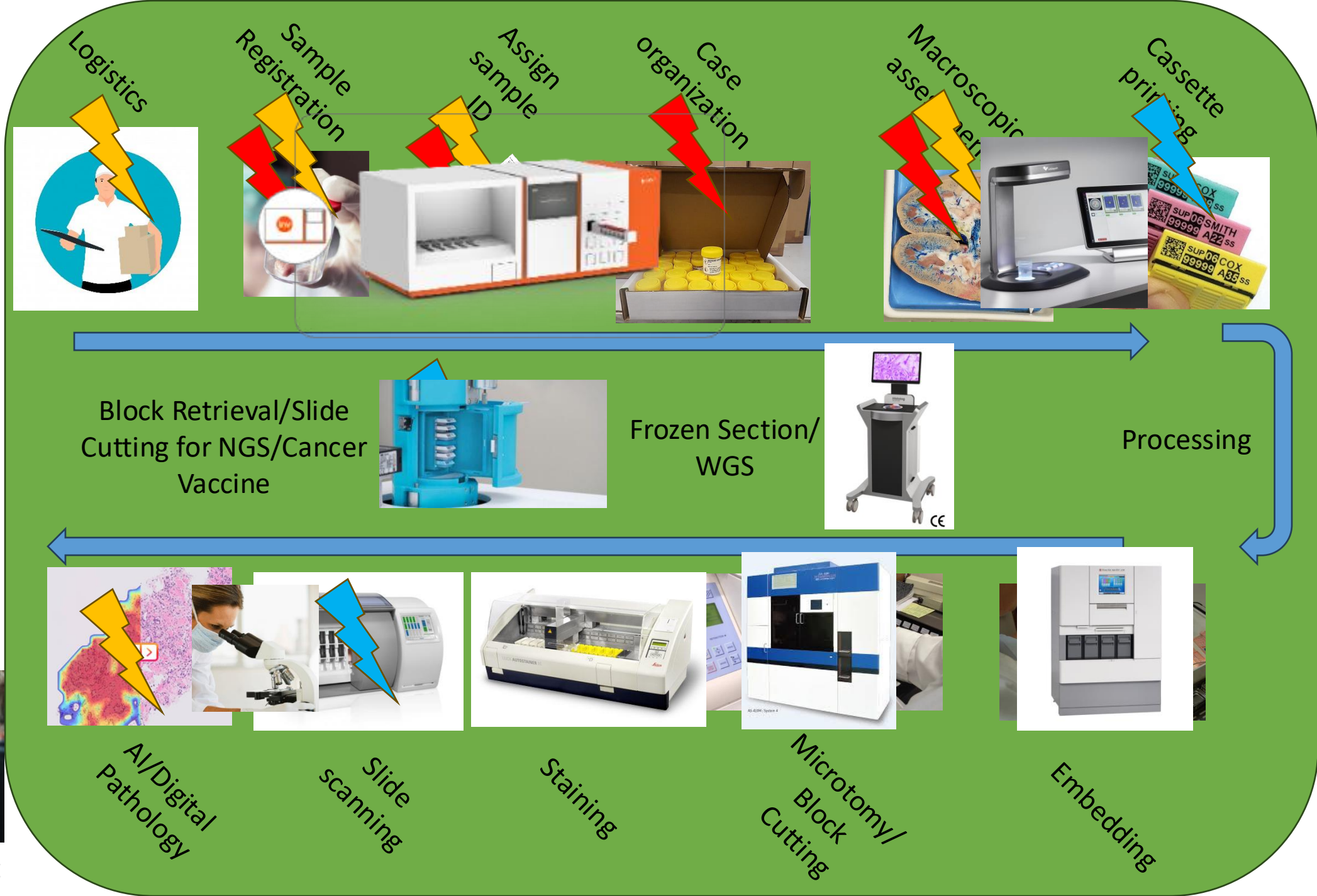
Histopathology





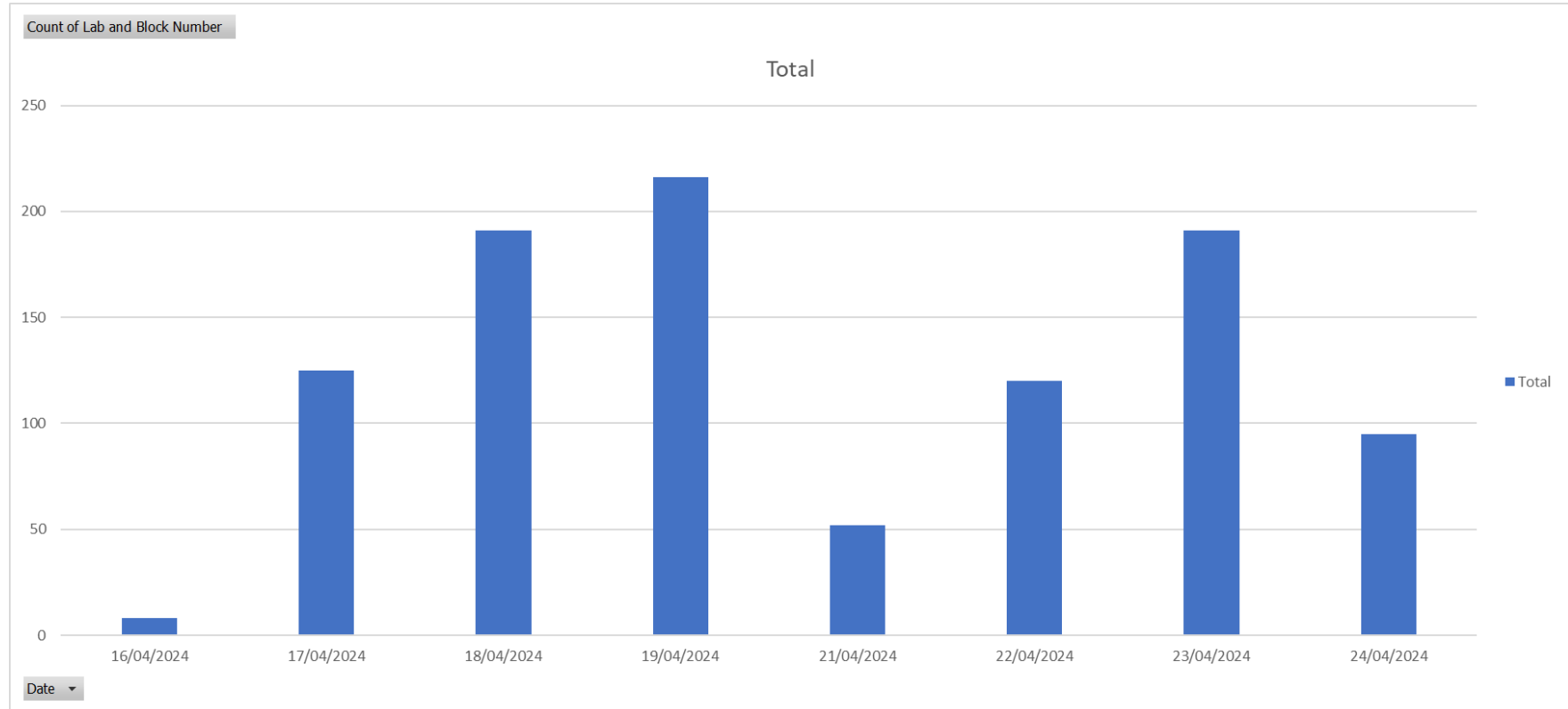


Sample extraction/  
Clinical Data



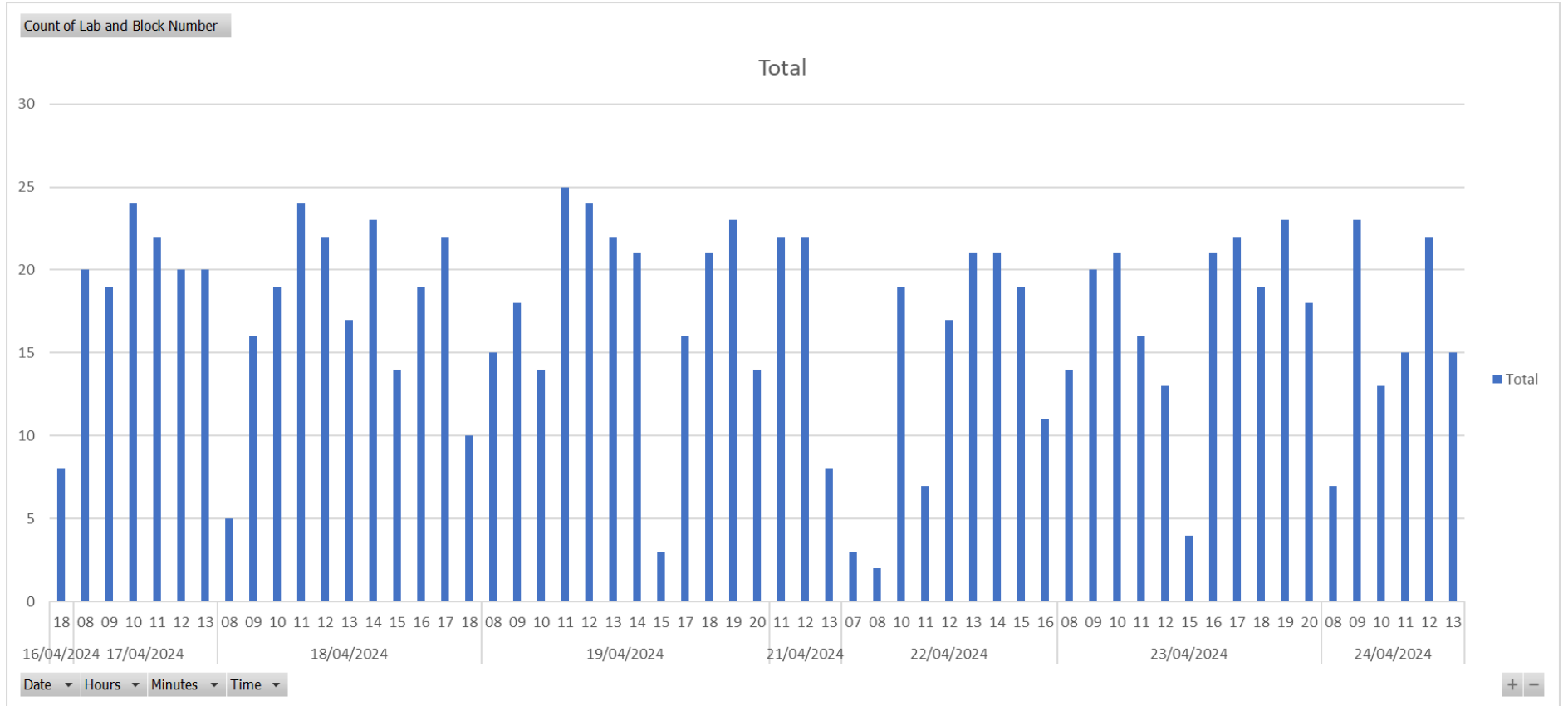
Diagnosis/Treatment

# AS-410 Automated Sectioner

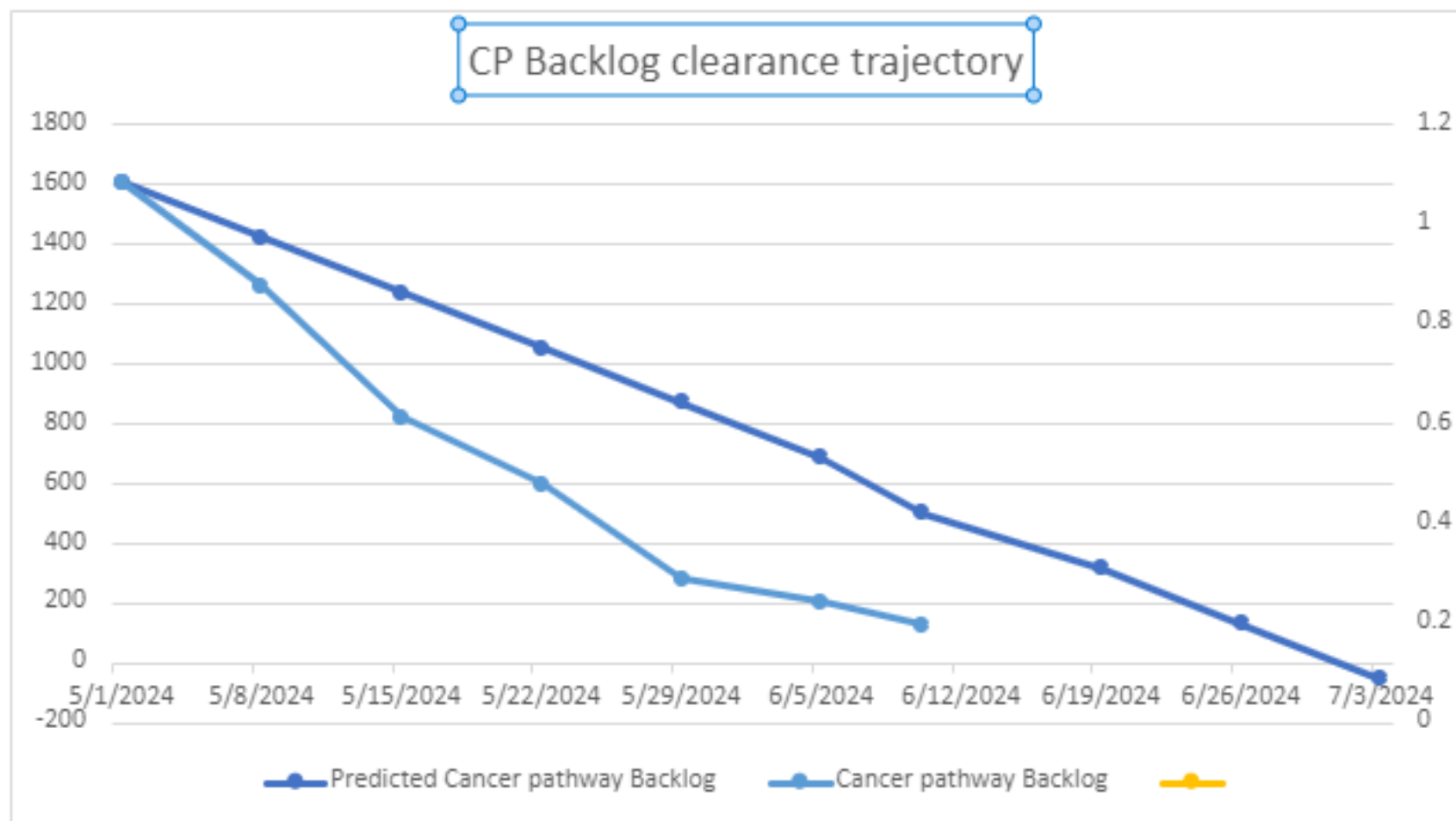




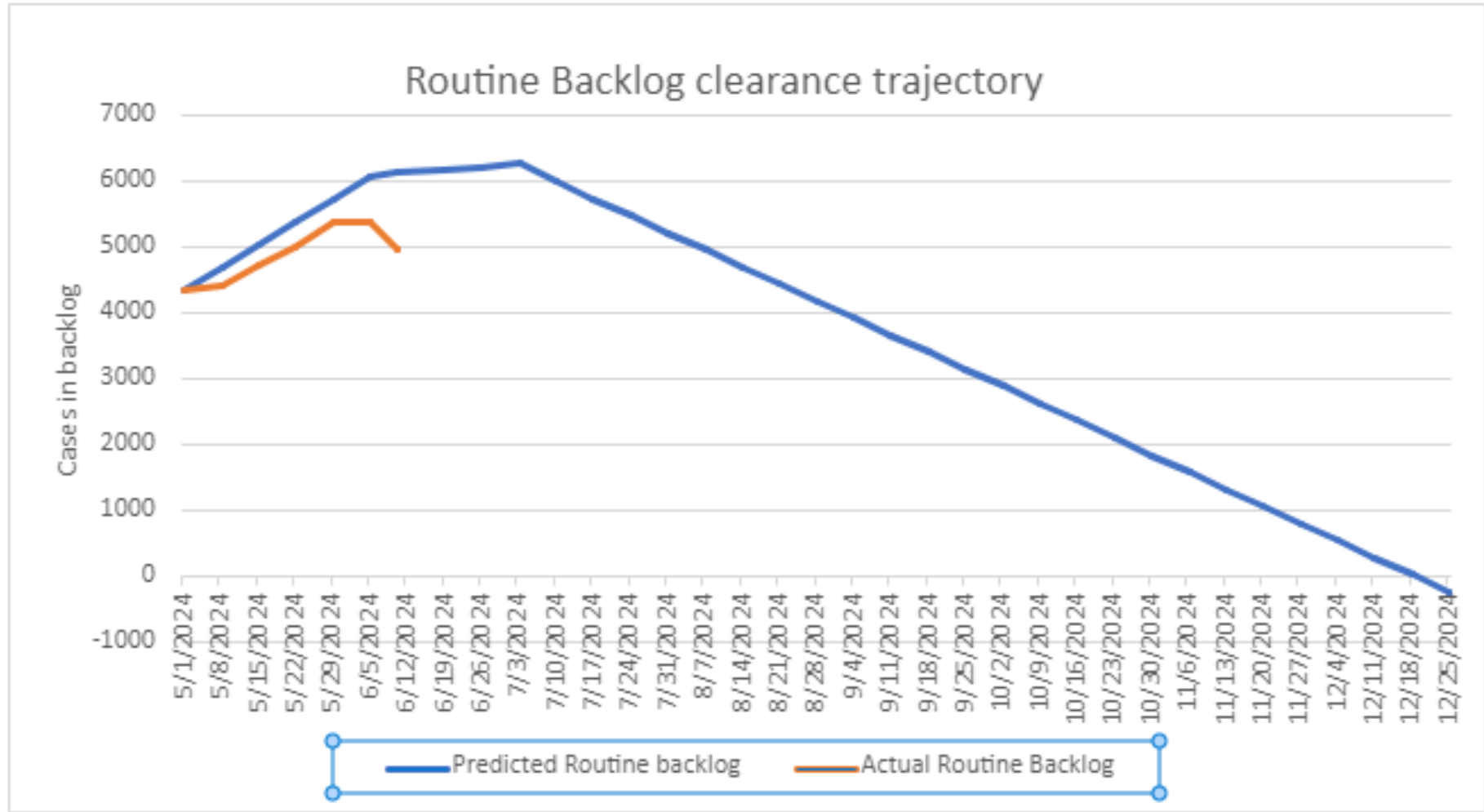
# AS-410 Automated Sectioner



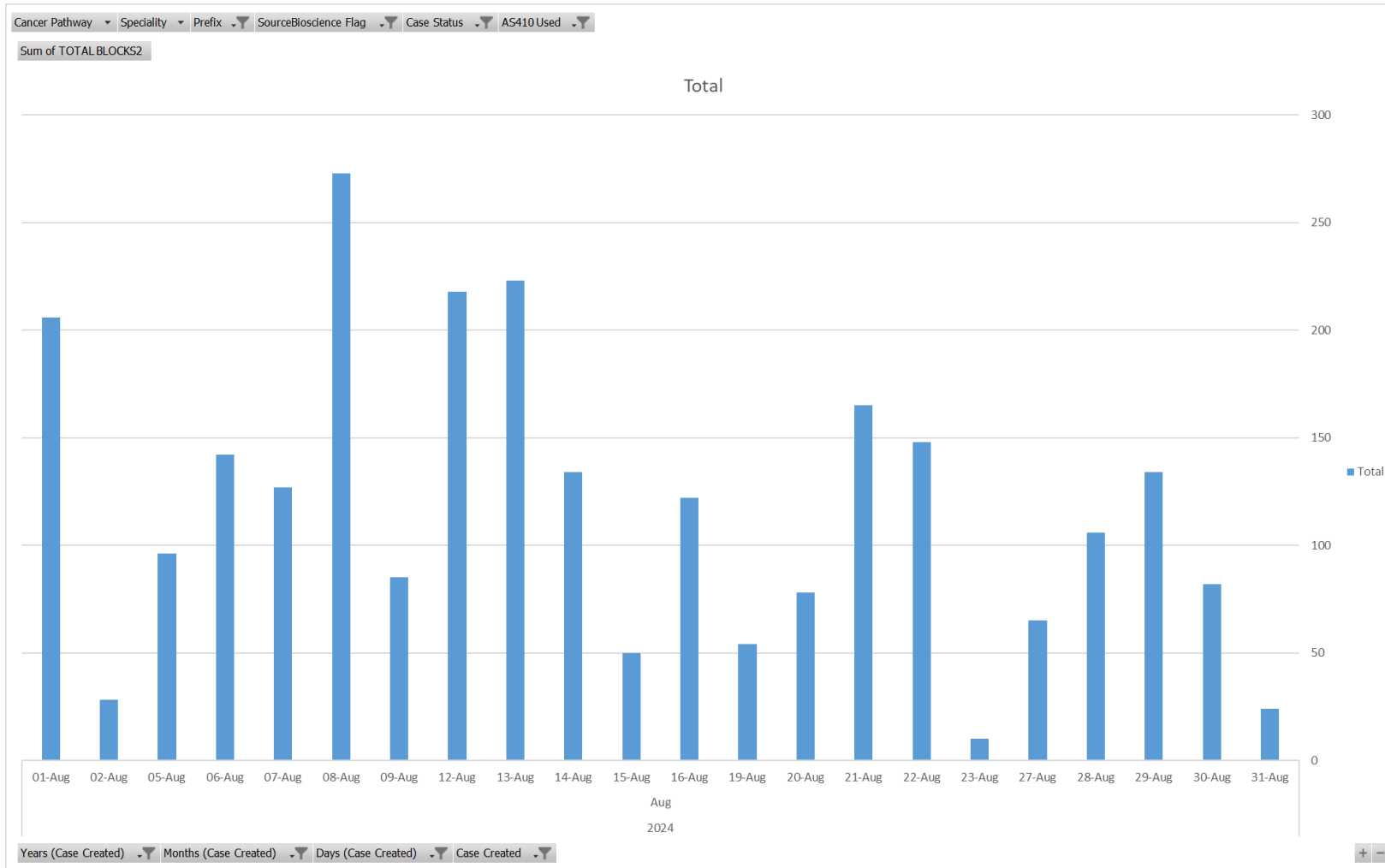
# Backlog



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# AS-410 Automated Sectioner

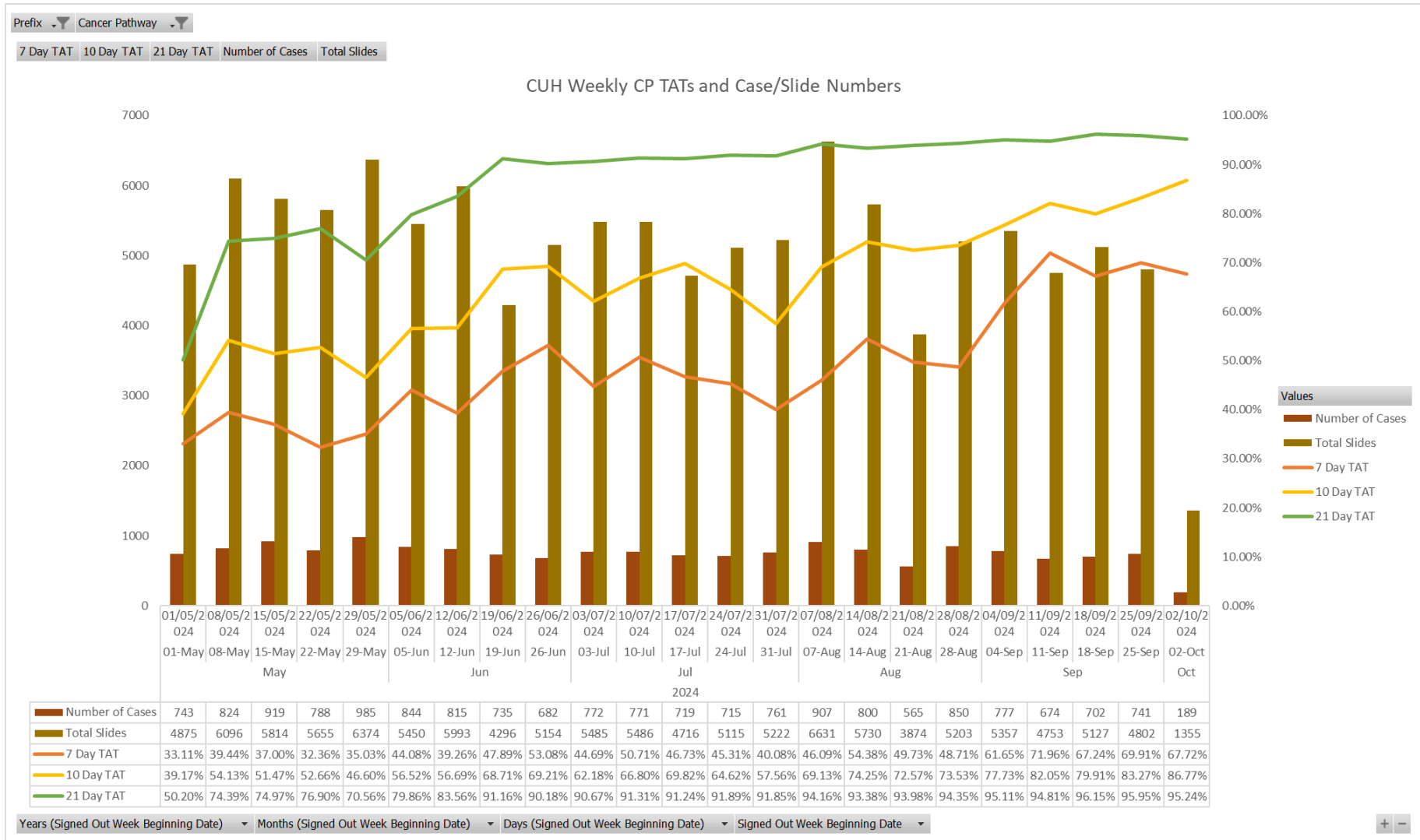


# Backlog

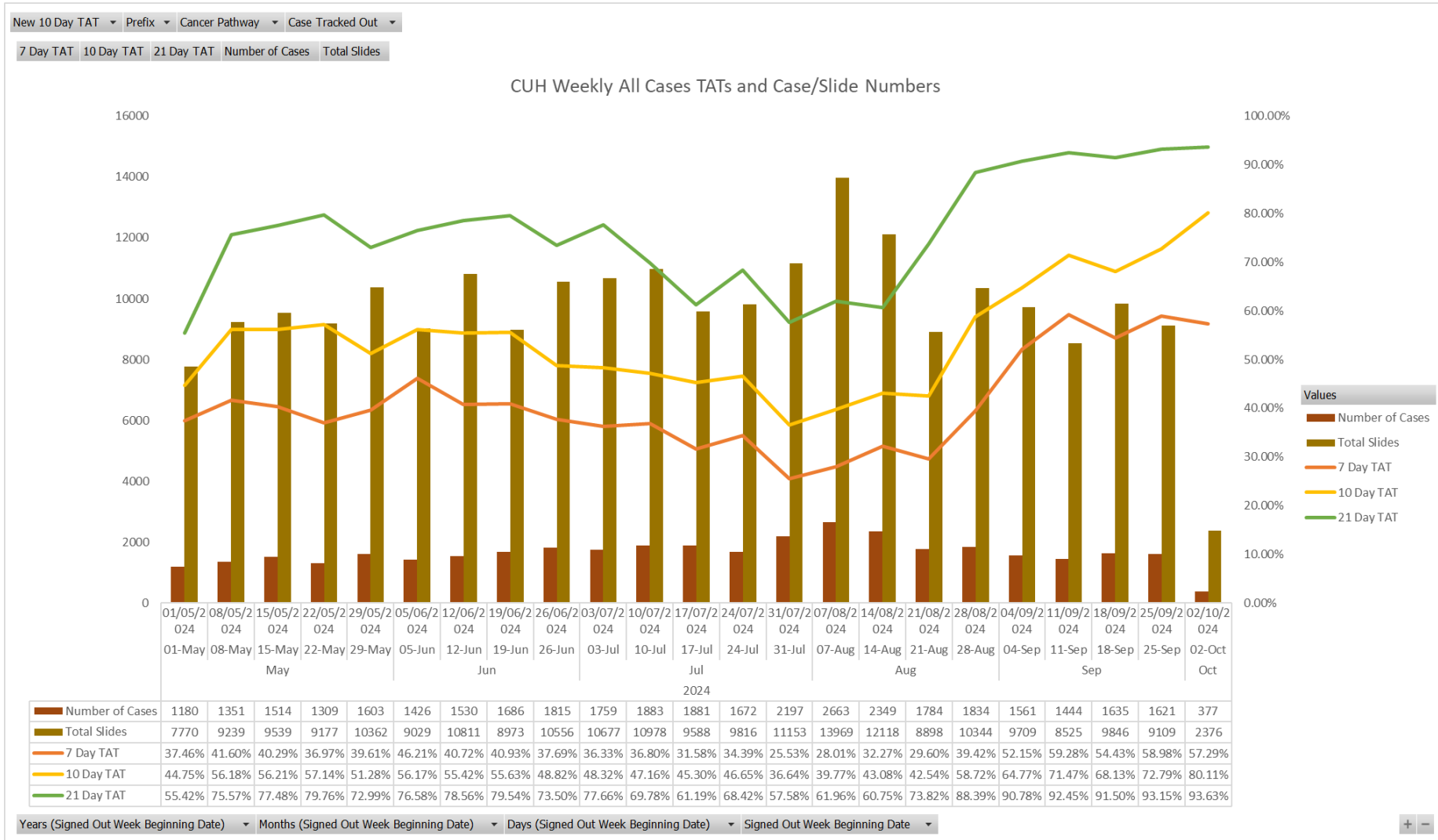
Case Trend in department



# Turnaround Time



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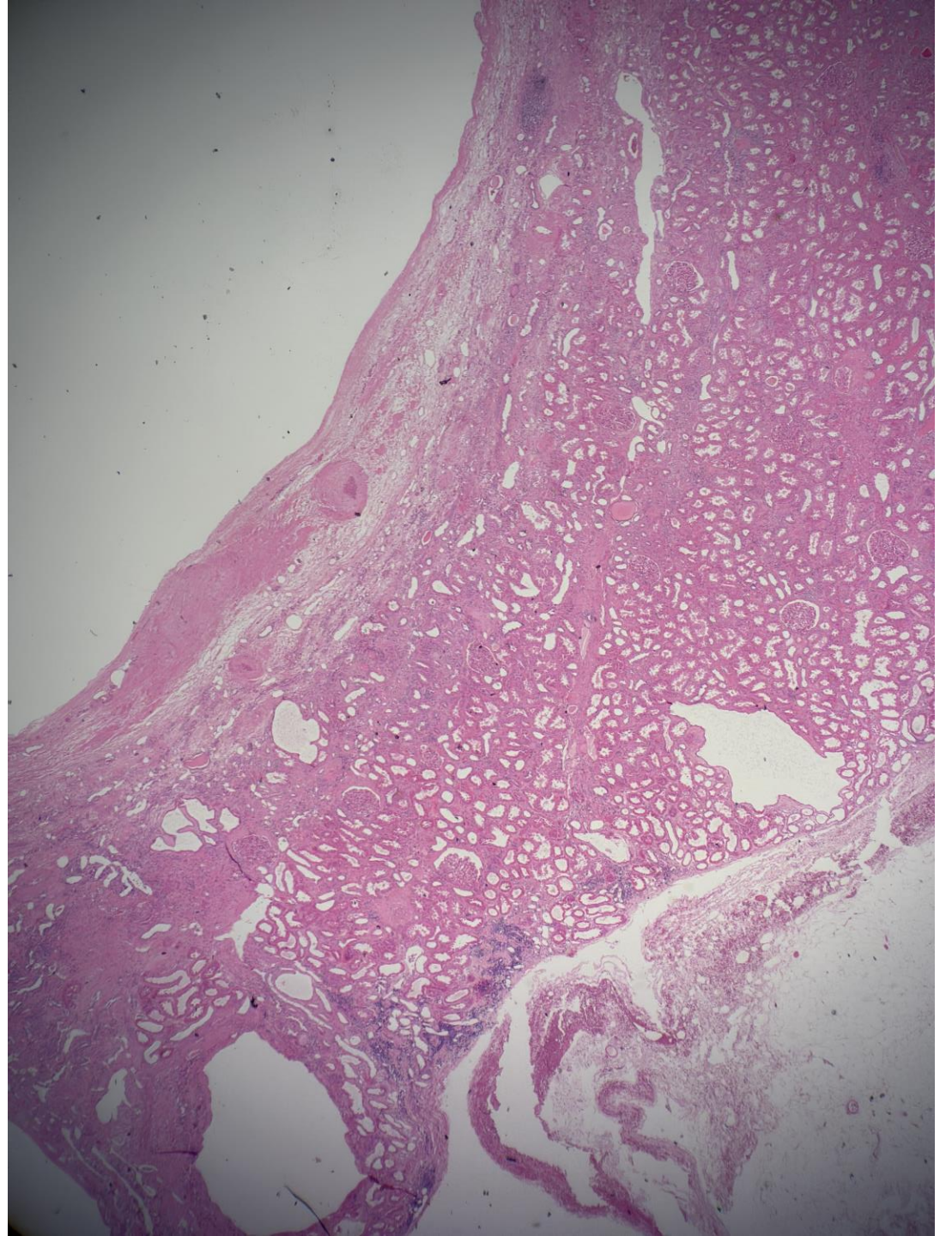
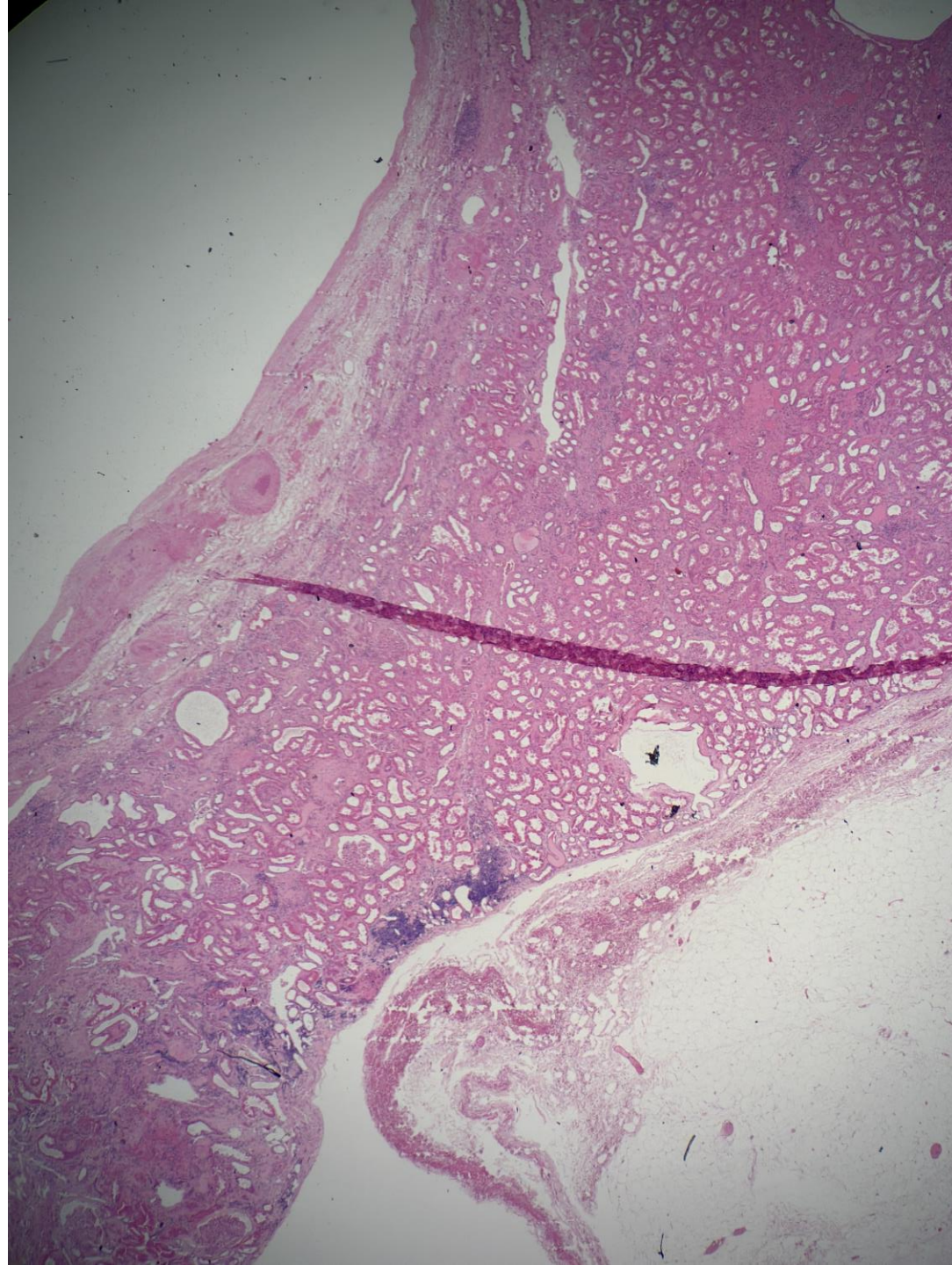




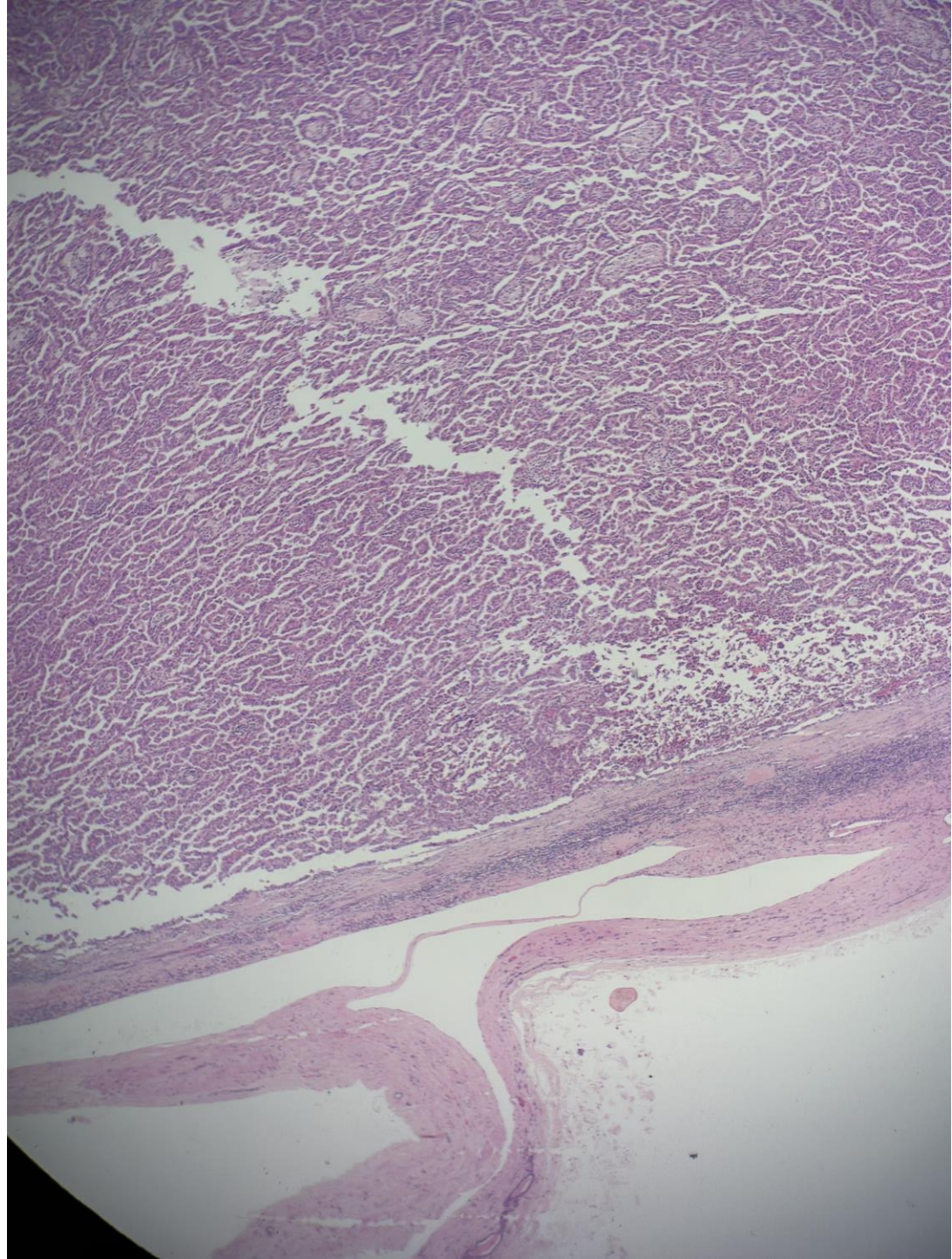
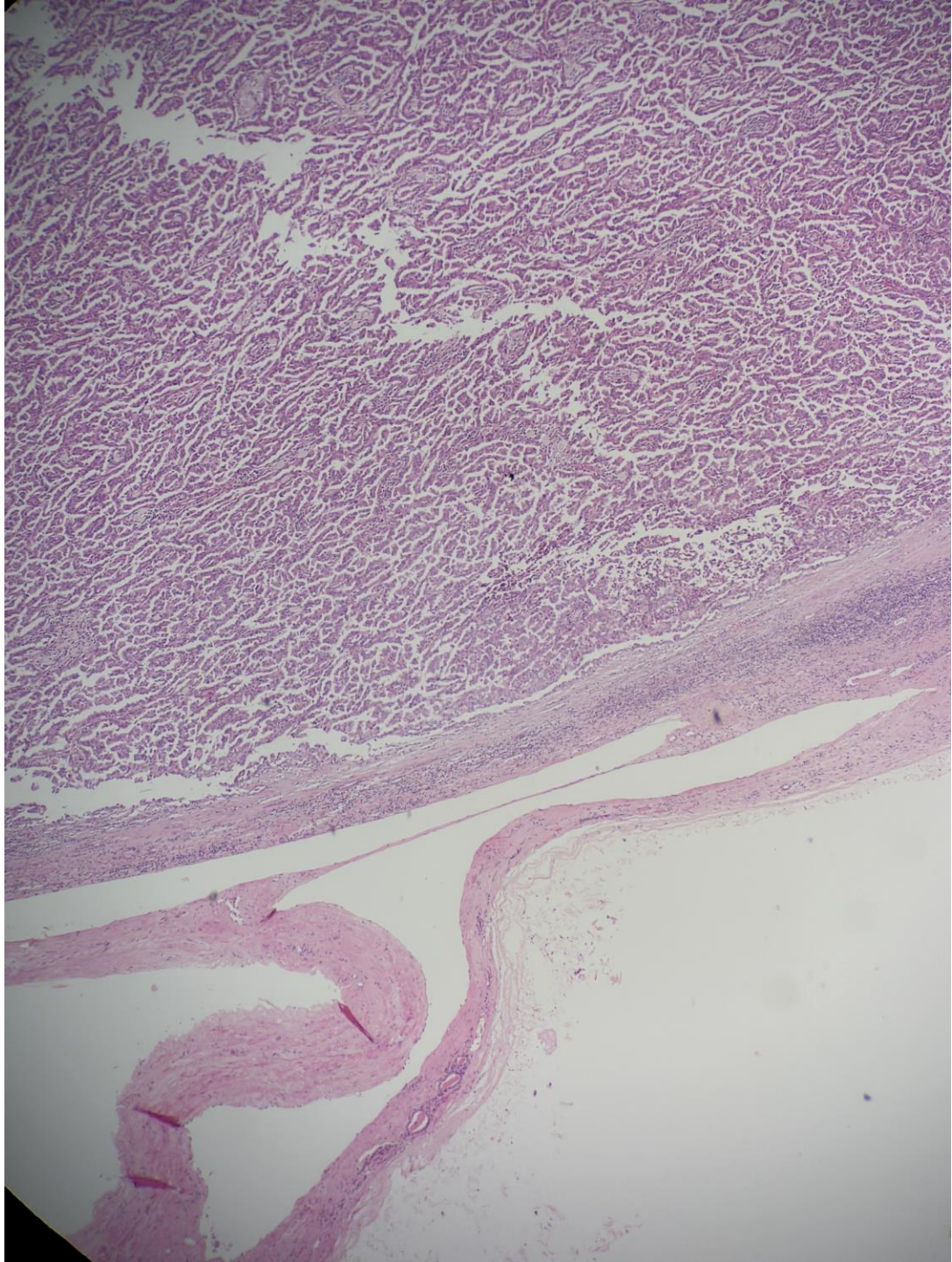
**Spot the  
difference**

**Automated or  
Manual?**





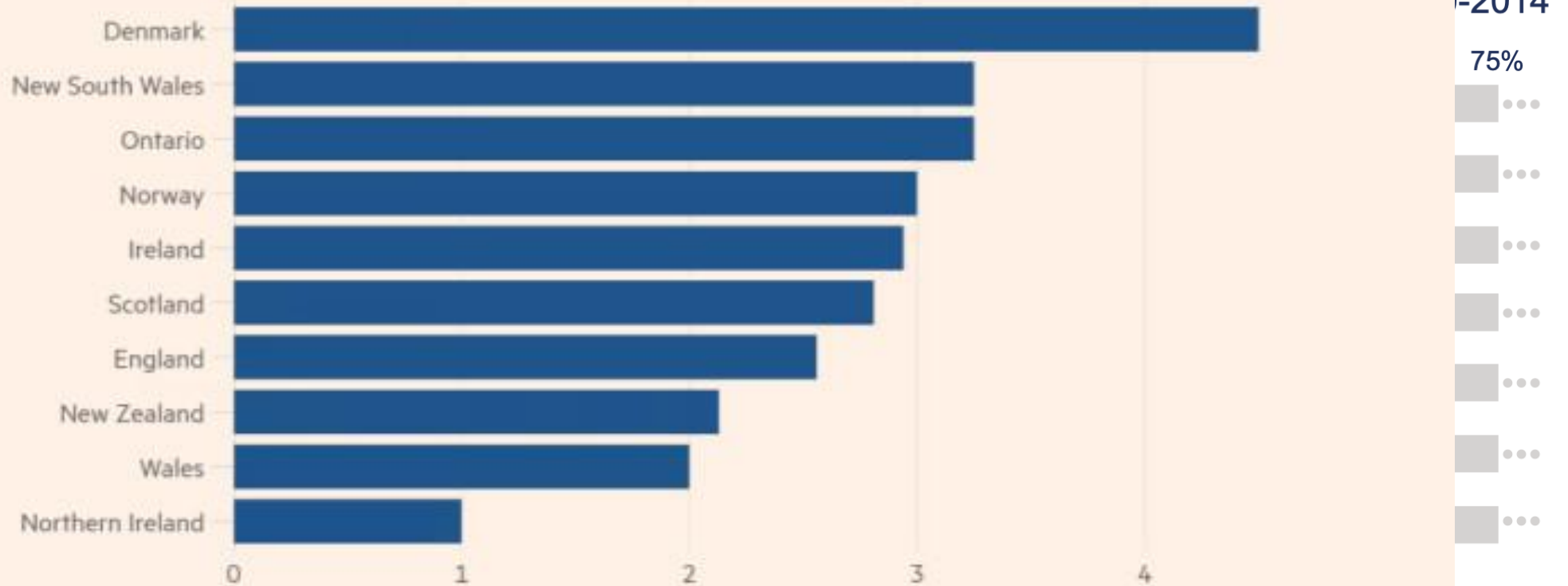






## Denmark leads the way on the consistency of its cancer policies

Consistency of cancer policies in 10 jurisdictions, 1995-2014\*



\*Data are weighted scores

Source: International Cancer Benchmarking Partnership

Colon

5-year n

Australia

Canada

Denmar

Norway

NZ

Ireland

UK

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