

43 Years of Autopsies at OHSU

Anecdotes & Opinions

Peter Stenzel

Background/education

Institution

University of Oregon Medical School 1961 – 1966

US Navy 1967-1969

OHSU graduate school (biochemistry) 1970 – 1974

Pathology residency OHSU 1975-1977

Teachers

faculty including Dr. Albert Starr

Dr. Richard Jones

Dr. David Linder

Why do we still do autopsies?

The usual justification refers to the Goldman criteria for autopsy discrepancies:

Major discrepancies

Class I Missed major diagnosis with potential adverse impact on survival and that would have changed management

Class II Missed major diagnosis with no potential impact on survival and that would have not changed therapy

Minor discrepancies

Class III Missed minor diagnosis related to terminal disease but not related to the cause of death

Class IV Other missed minor diagnosis

Changes over 40 years

Fewer solid tumor cases

Transplant cases

The same for 40 years

Generosity of families

Interesting case

A 76-year-old man presented at an outside hospital with a history of a ground level fall and weakness.

On physical examination, abdominal distension and no external evidence of trauma were found.

Imaging indicated a liver laceration with active bleeding.

Only comfort care was provided consistent with patient and family wishes.

He died a few hours later.

A complete autopsy was done.

Autopsy findings

1850 mL hemoperitoneum

Rupture of Glisson's capsule on the inferior surface of the liver

Multiple large blood-filled intrahepatic cysts revealed on section



Diagnostic possibilities

Malignant tumor – notably angiosarcoma

Benign tumor – notably cavernous hemangioma

Polycystic liver with intracystic hemorrhage

????

Pubmed:

Dave YA, et al. BMJ Case Rep 2019;12:e226737.

Case report Liver haematoma as a presentation of peliosis hepatis

Rare disease

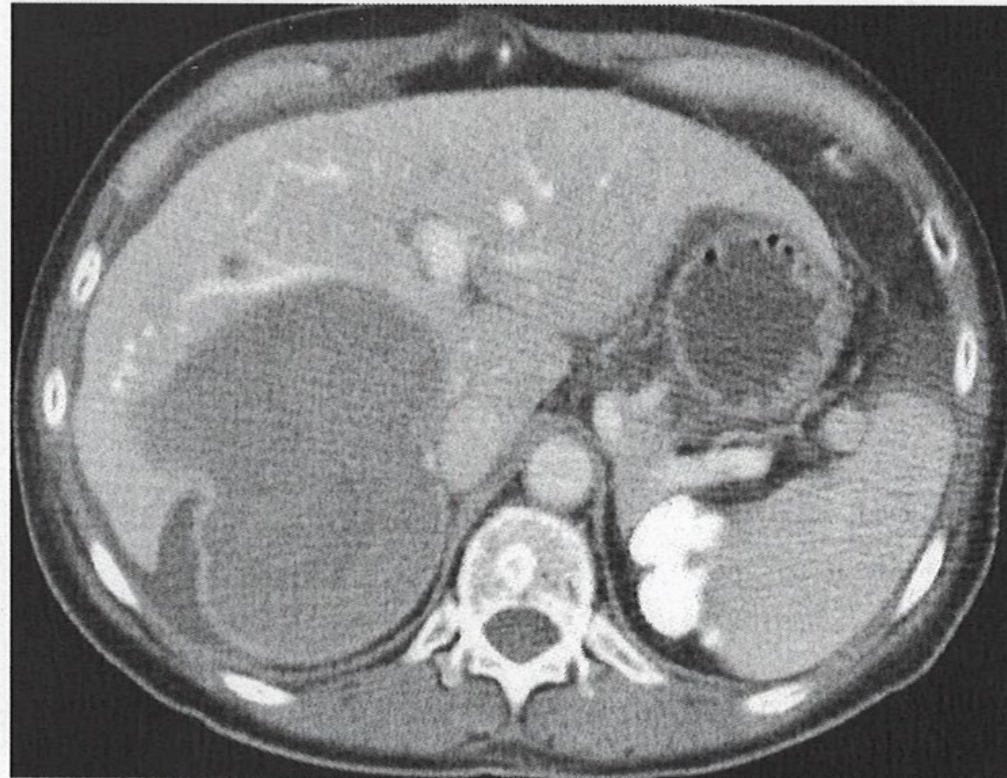


Figure 1 CT Abdomen with IV and oral contrast.

Tsokos M, Erbersdobler A. Pathology of peliosis.
Forensic Science International 149 (2005) 25–33



Pubmed

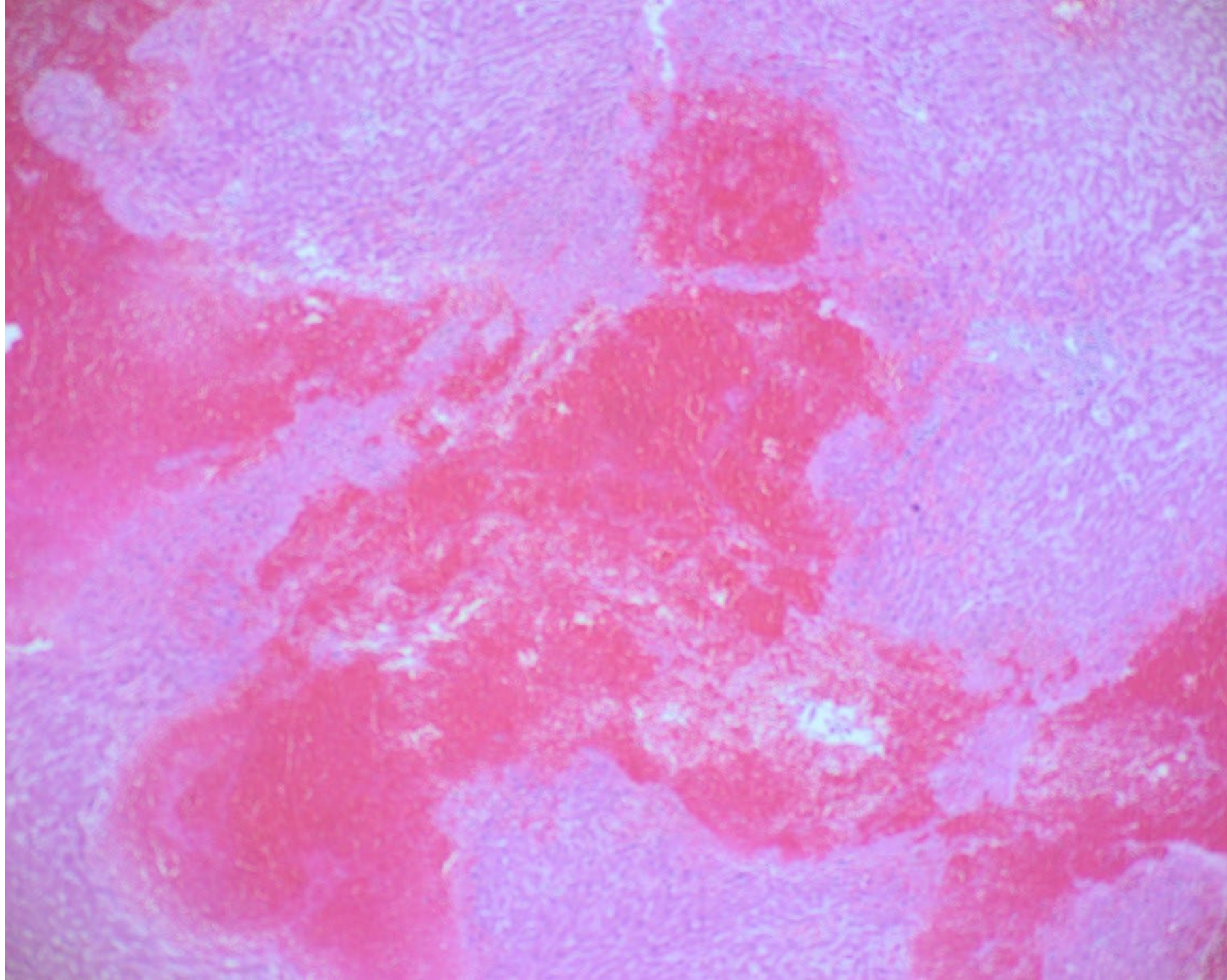


OHSU



Peliosis hepatis case

Liver micro images



Peliosis hepatitis associated conditions:

Chronic wasting disease

Tuberculosis

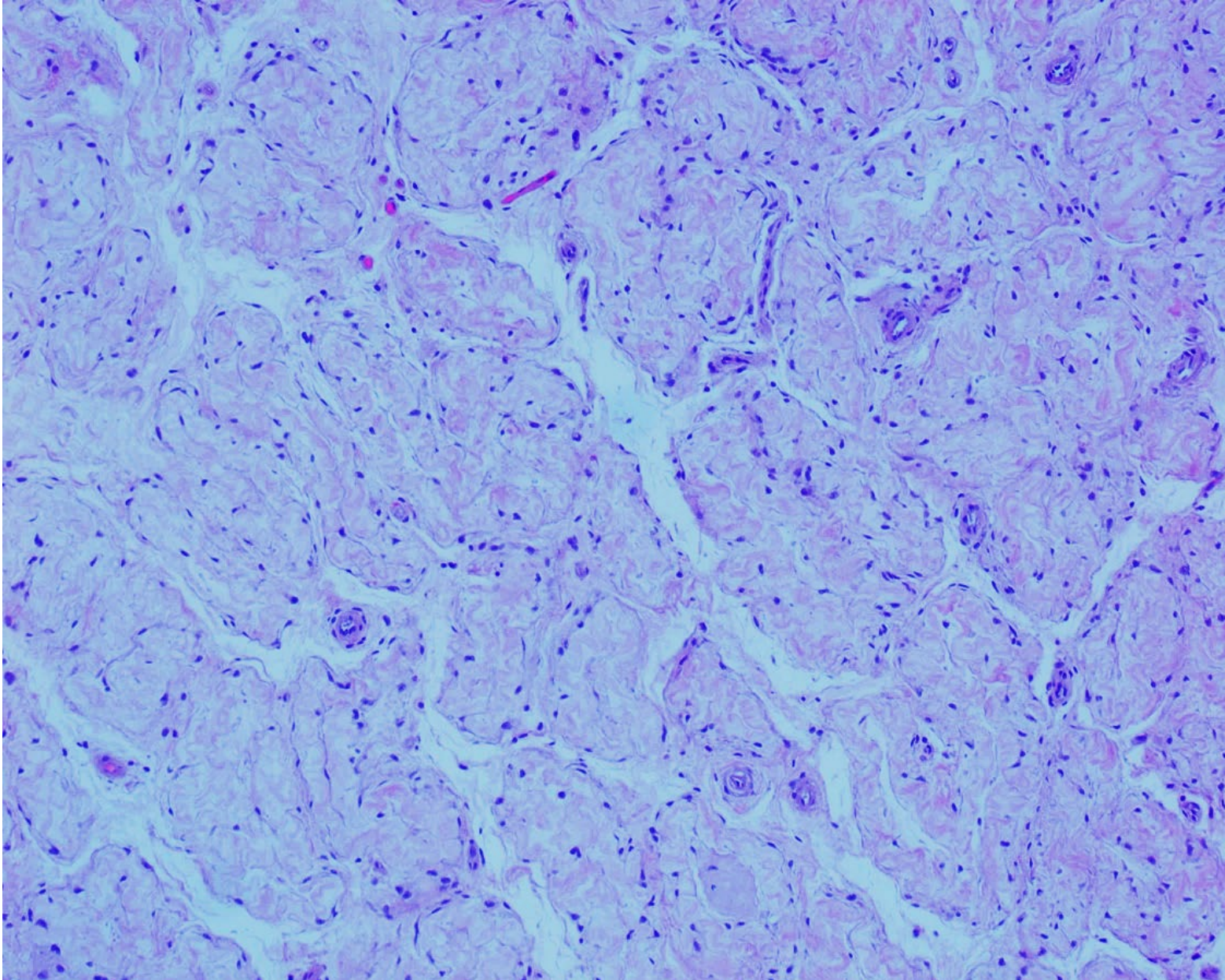
HIV

Drugs

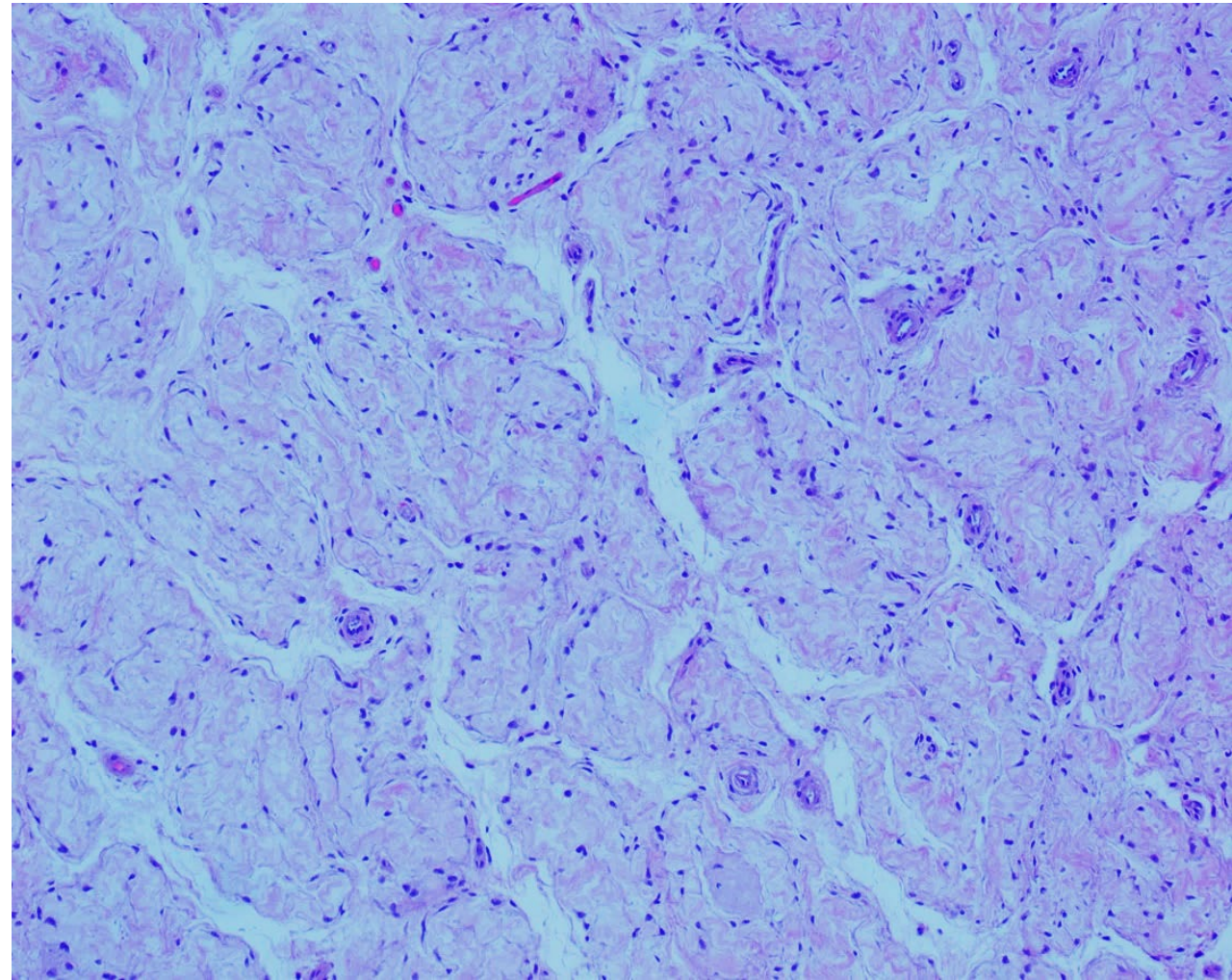
Oral contraceptives

Anabolic androgenic steroids

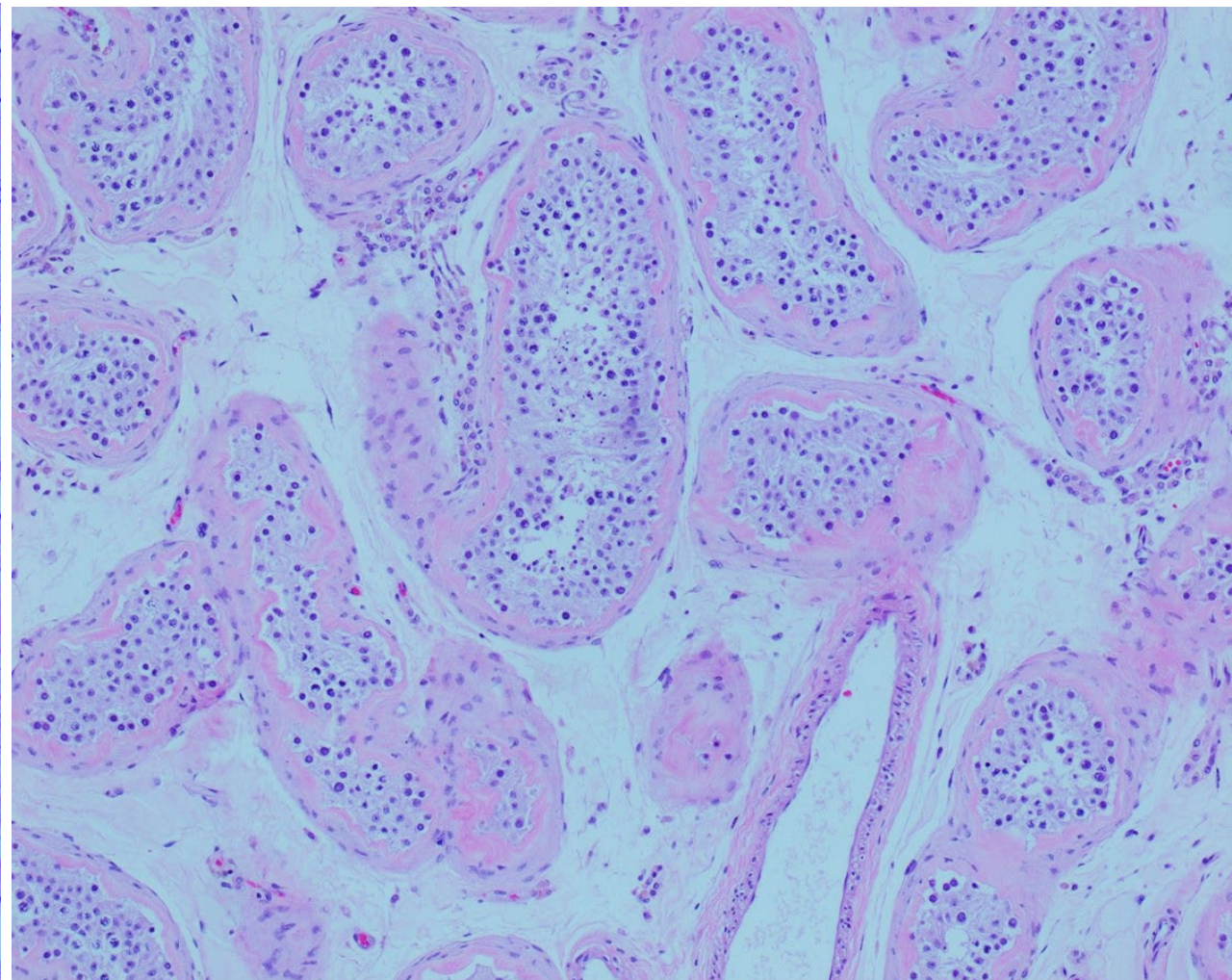
Fibrosis of seminiferous tubules



Testis microscopy

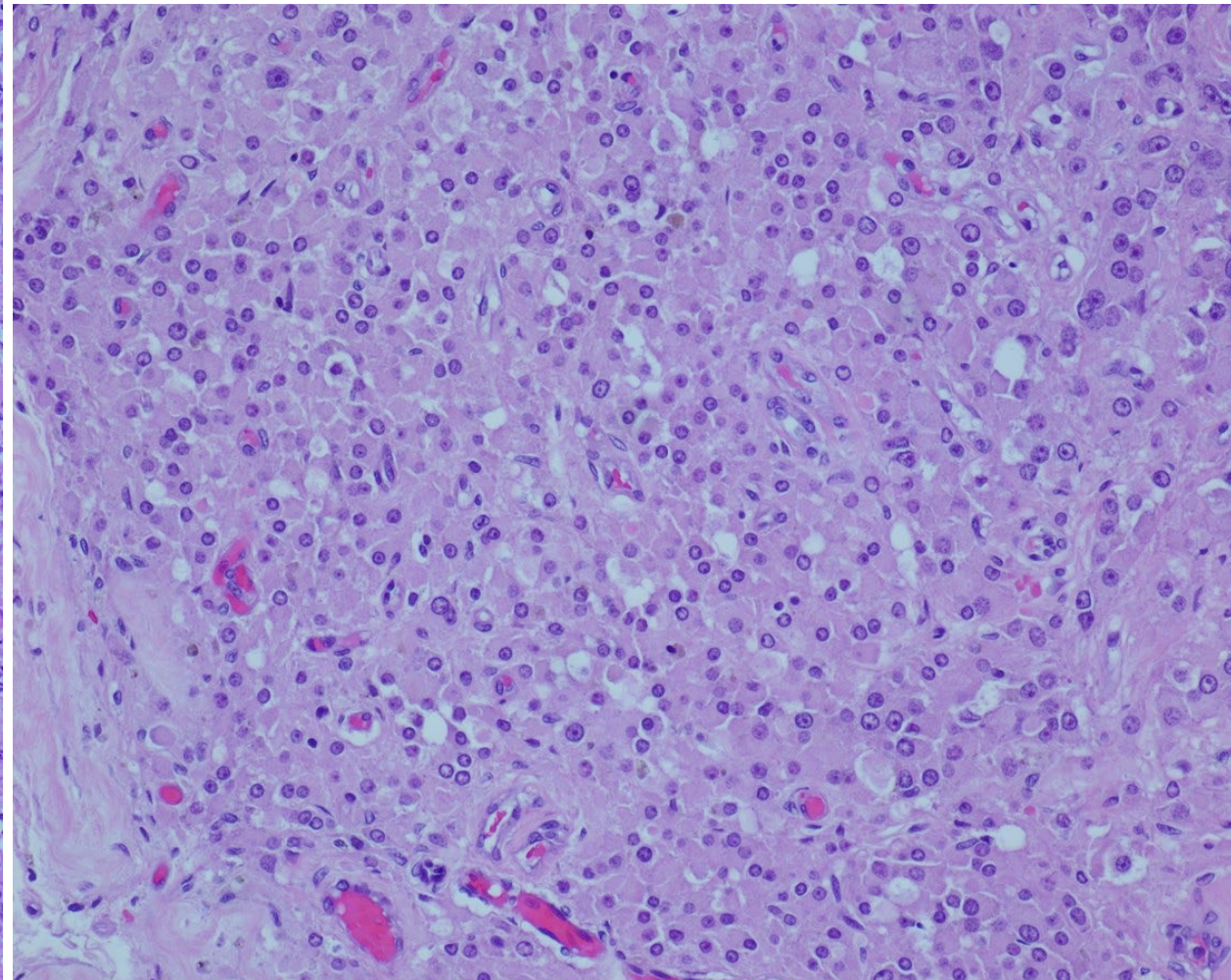
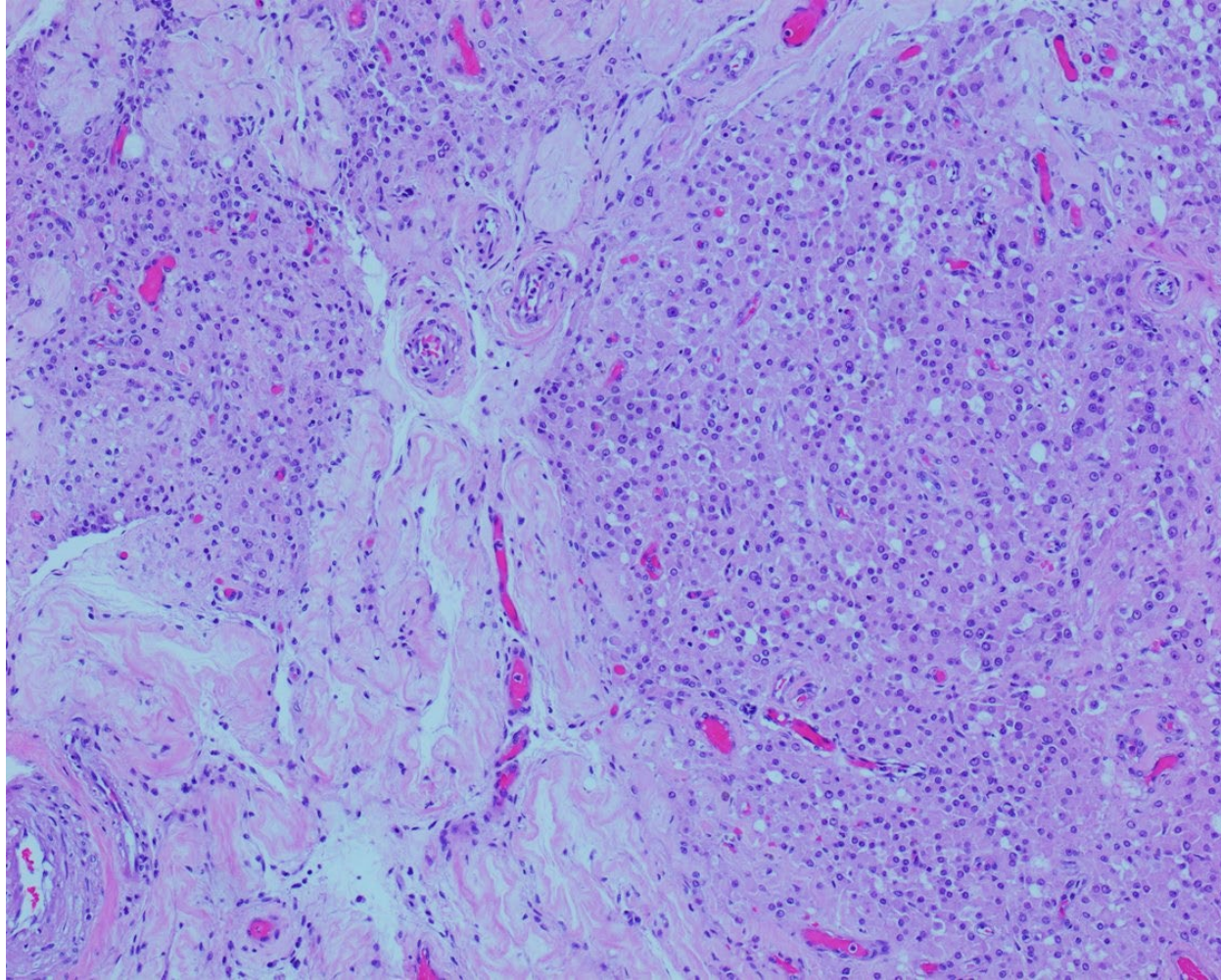


Fibrosis of seminiferous tubules

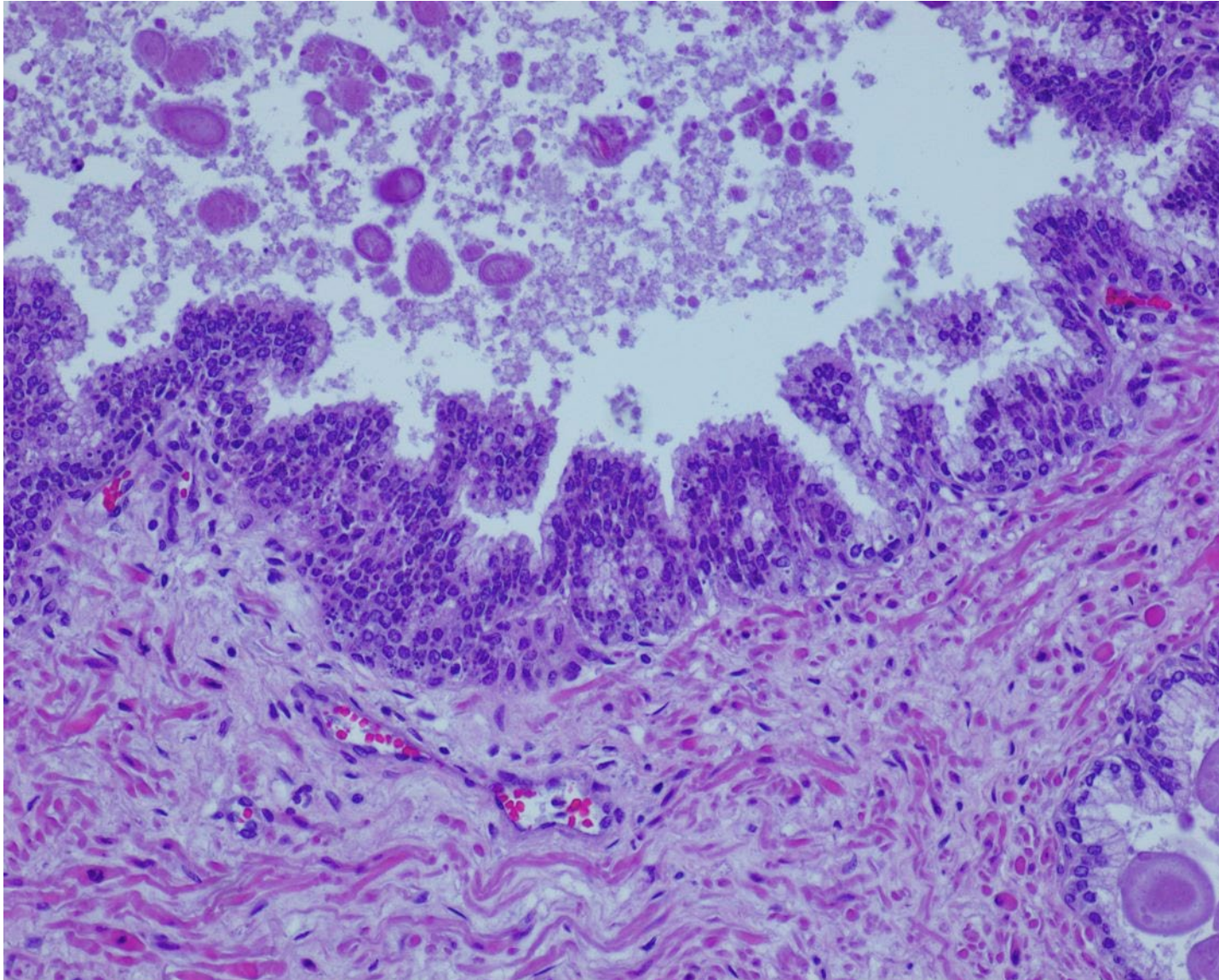


Normal testis

Testis microscopy : Leydig cell hyperplasia



Prostate microscopy : Epithelial hyperplasia



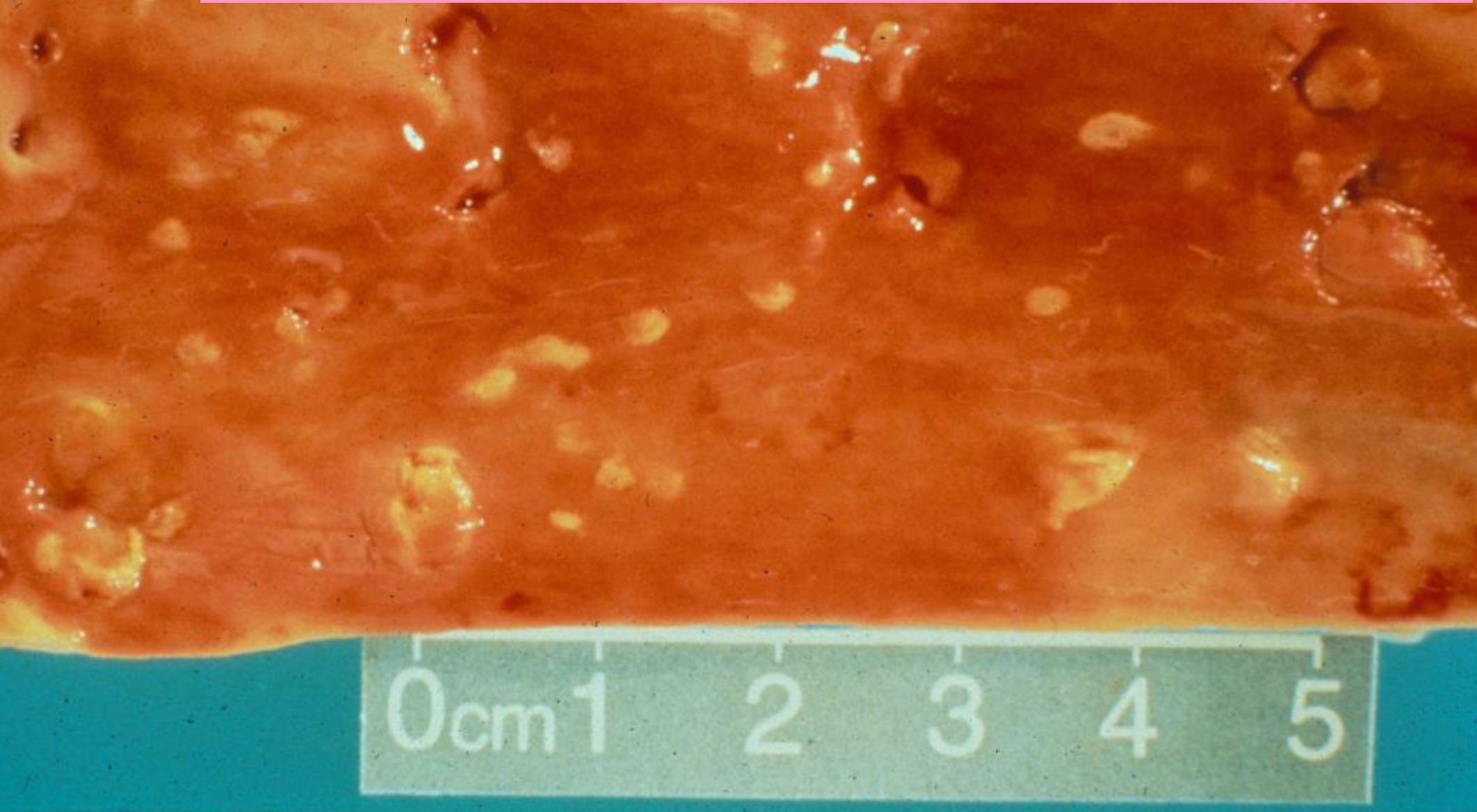
Gross examination at autopsy

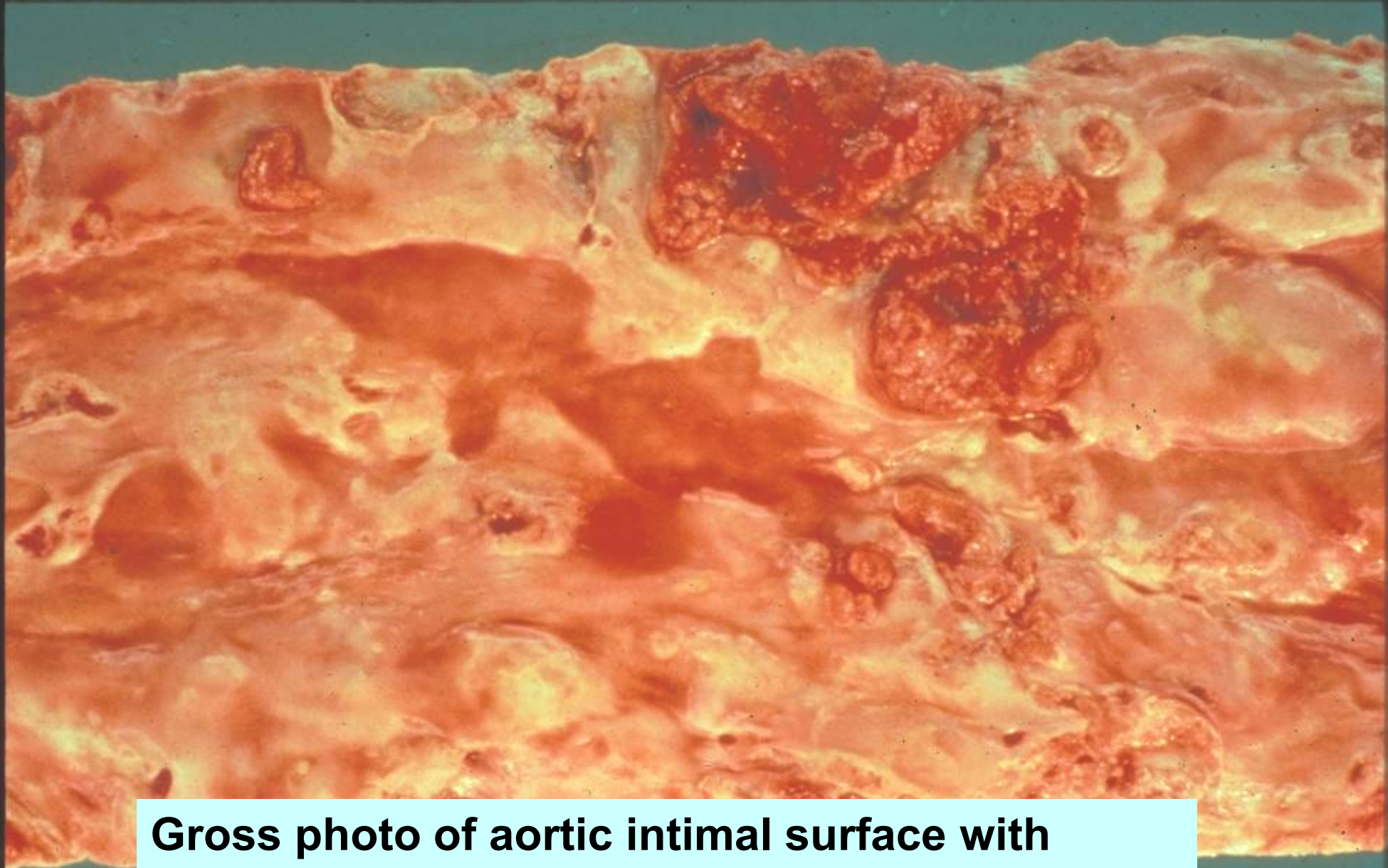
External examination

Internal examination

Part of the initial part of the internal examination is the opening and inspection of the aorta.

Gross photo of intimal surface of the aorta with numerous uncomplicated atherosclerotic plaques

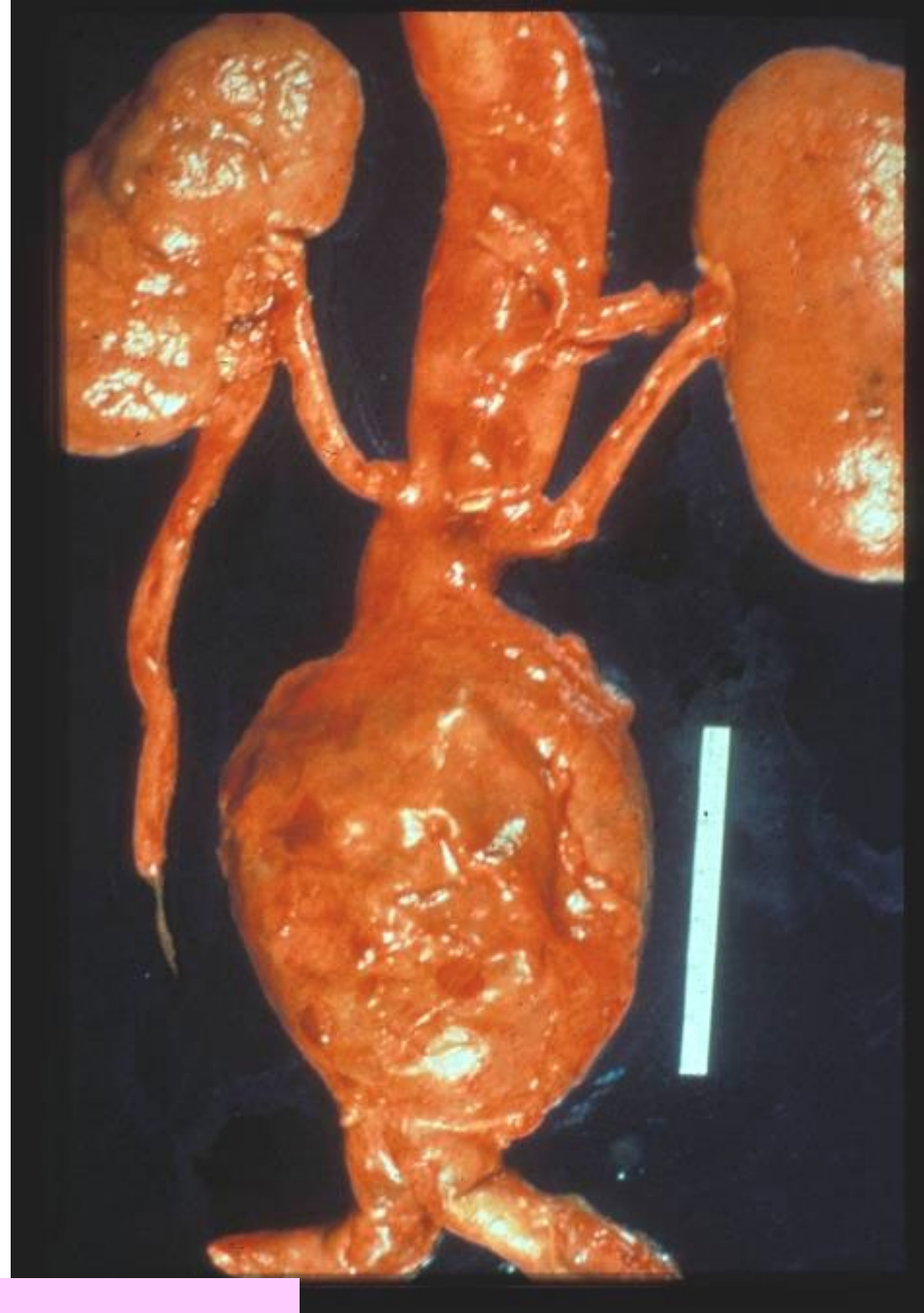




Gross photo of aortic intimal surface with numerous complicated atherosclerotic plaques



Distal aorta with severe atherosclerosis and early aneurysm formation



Abdominal aortic aneurysm

Is atherosclerosis much less severe in subjects with alcoholic liver cirrhosis than in subjects without alcoholic liver cirrhosis?

Howell WL, Manion WC. The low incidence of myocardial infarction in patients with portal cirrhosis of the liver: A review of 639 cases of cirrhosis of the liver from 17,731 autopsies. Am Heart J 1960;60:341-344

“In this study, old and/or recent myocardial infarction was found to be less than one fourth as common in cirrhotic patients as in noncirrhotic patients.”

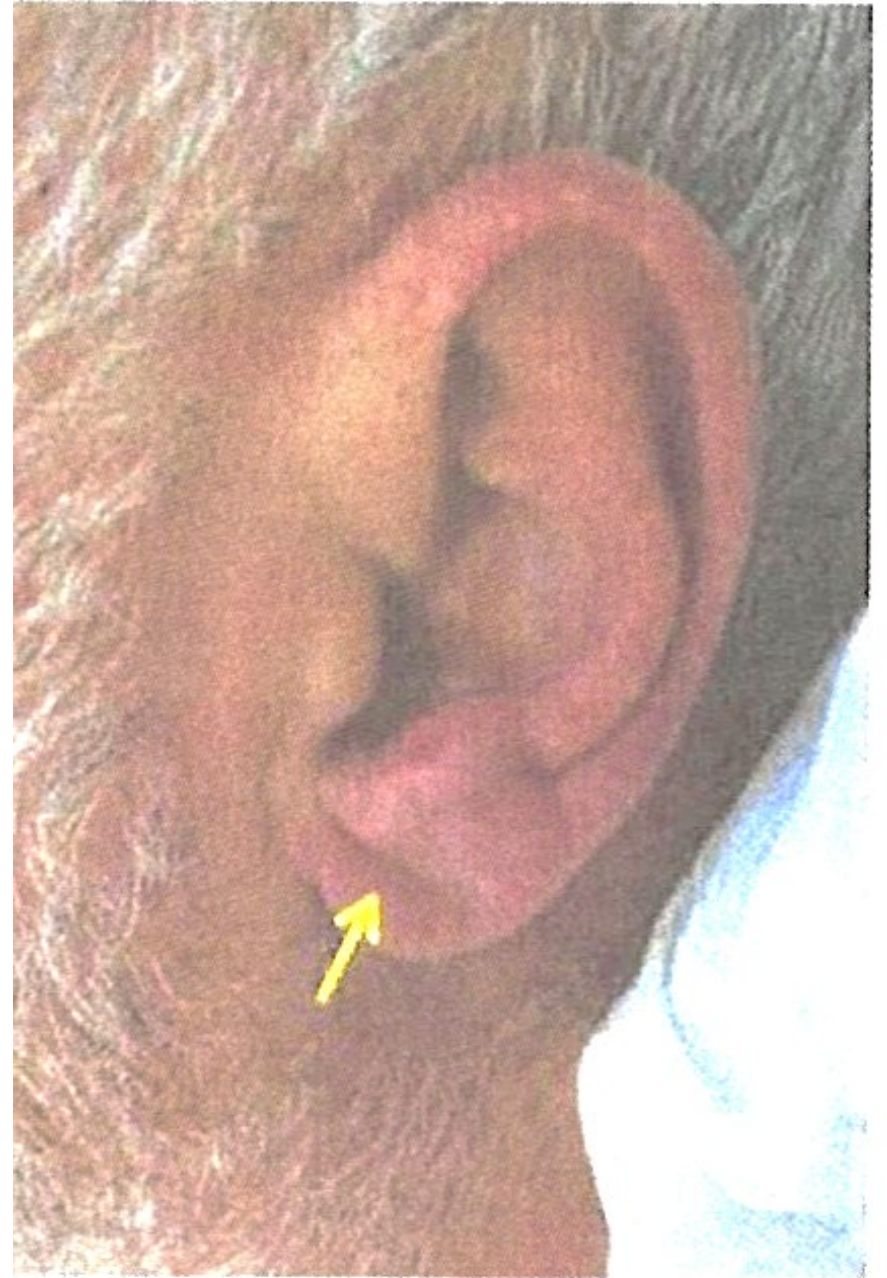
Dietary recommendations for prevention of atherosclerosis.

Riccardi G, Giosue A, Calabrese I, Vaccaro O. Cardiovascular Research. 2022;118:1188–1204.

“In summary, moderate alcohol consumption can be allowed to people already utilizing alcoholic beverages, since consumption of up to two glasses of wine per day in men and one glass in women or one can of beer is associated with a significantly lower risk of atherosclerosis in comparison to abstainers or to those consuming higher amounts of alcohol.”

Unfinished projects

Aural sign of coronary artery disease.
Frank ST. New Engl J Med.
1973;289:327-328



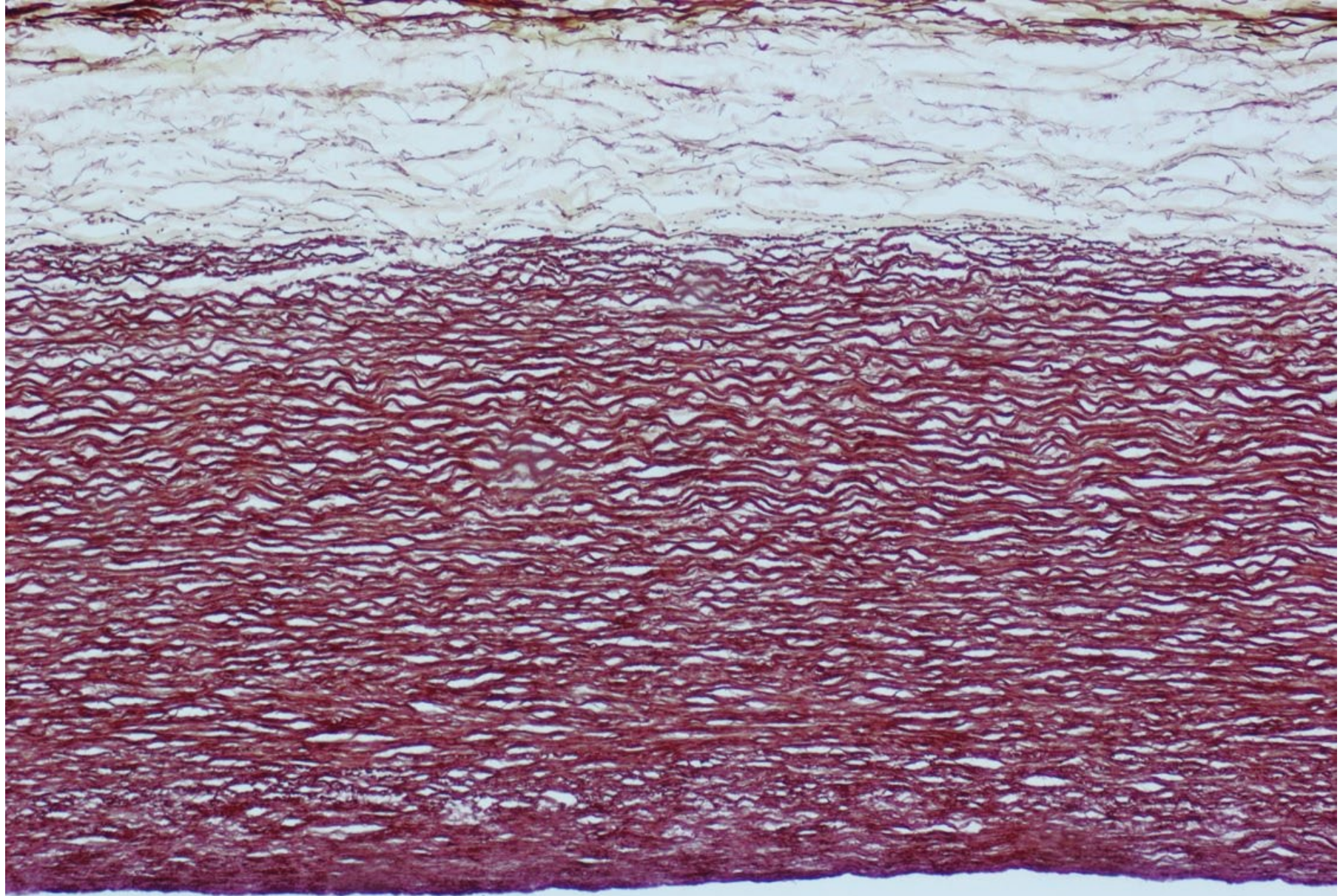
Mechanism of aortic rupture in blunt trauma

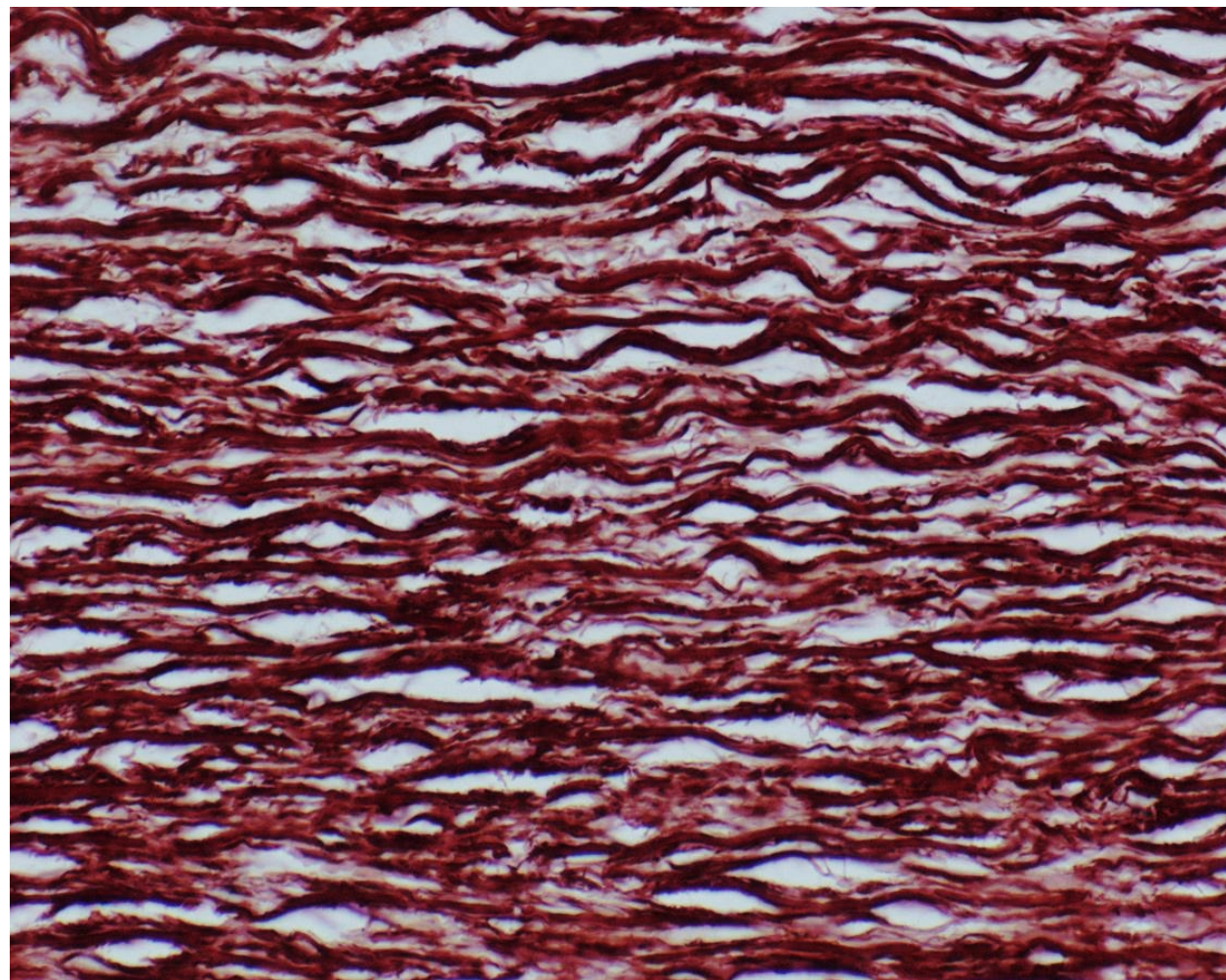
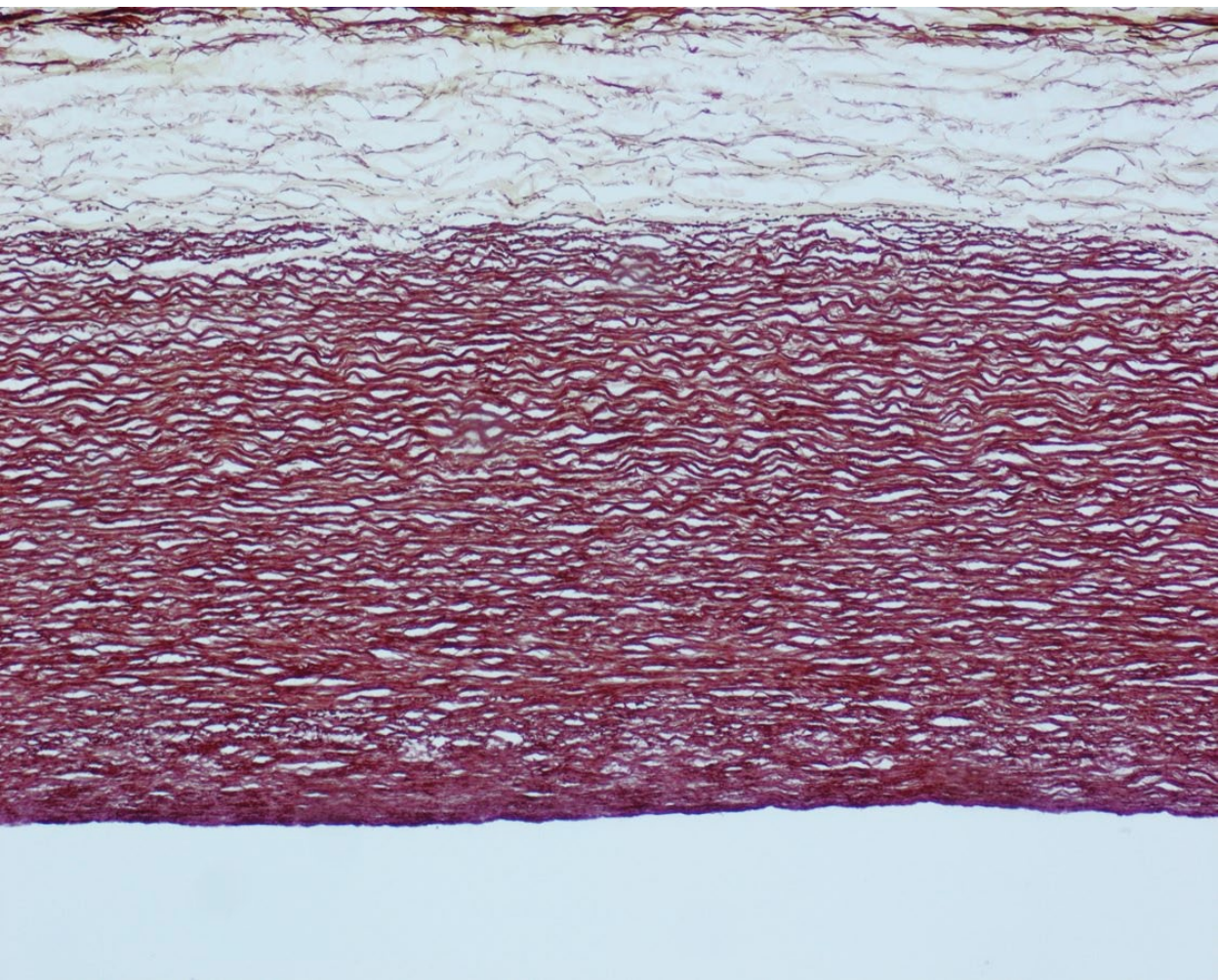
1. Disruption of the intima
2. Dissection
3. Rupture

Aorta histology images

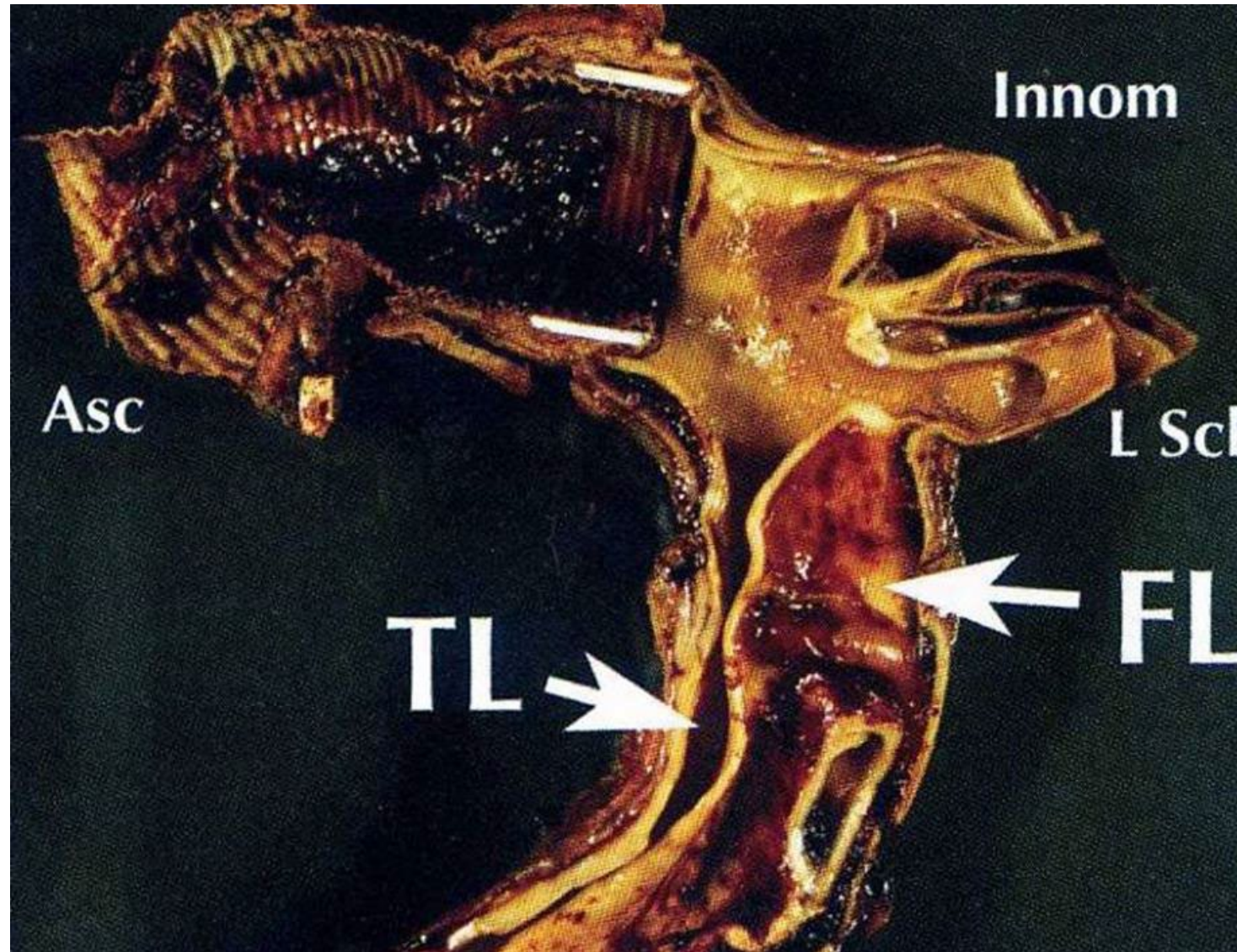








Aortic dissection



Aortic dissection



Aortic dissection textbook pathology

“There is some controversy over whether it is possible have aortic dissection without an intimal tear. The author has never seen such a case, but they are reported in the literature.”

Practical Cardiovascular Pathology. 2nd Edition. Hodder Arnold 2000.

Aortic dissection etiologies

Trauma

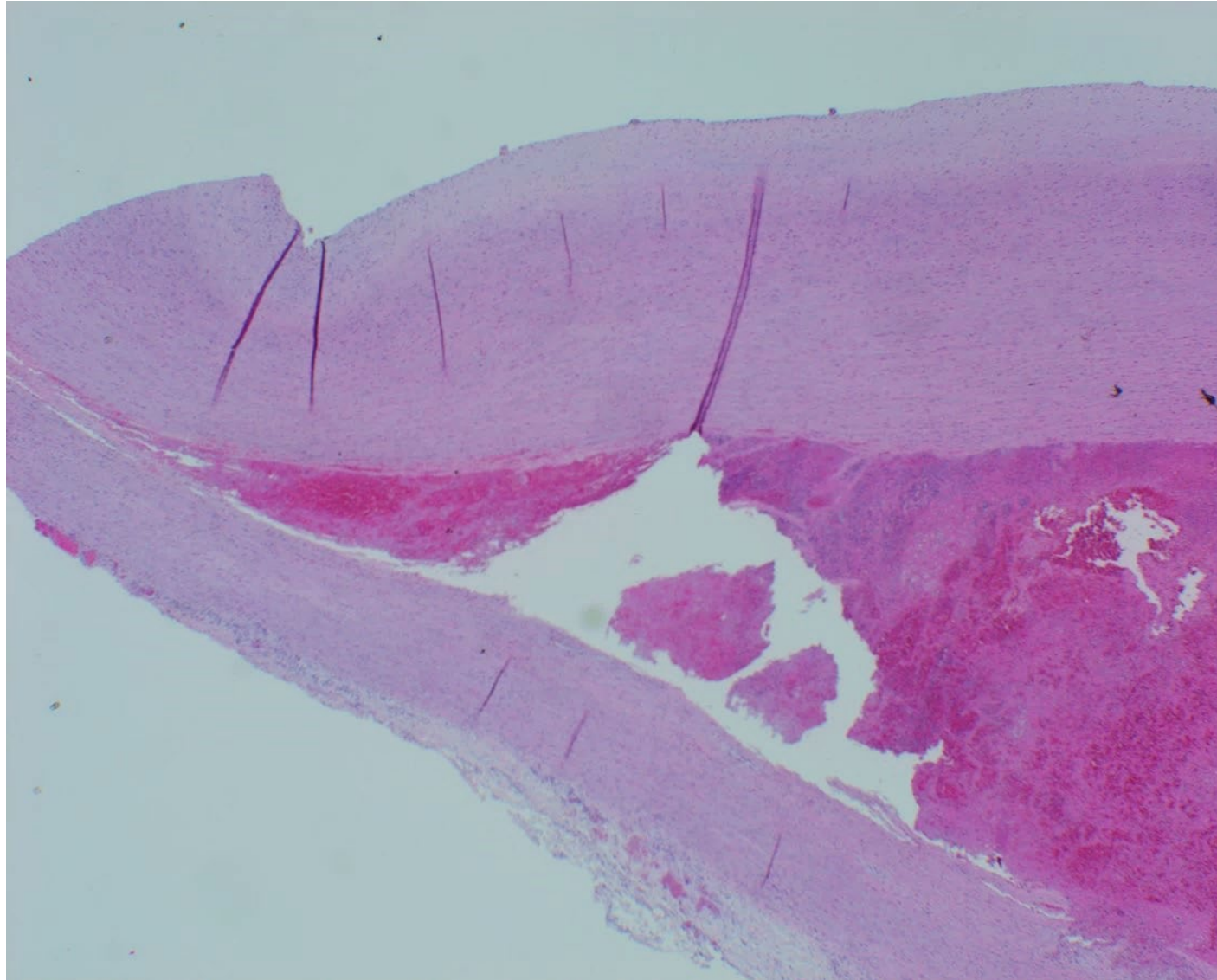
Turner syndrome (XO karyotype)

Mutation in the elastin gene (Marfan syndrome)

Mutation in the transforming growth factor-beta gene
(Loeys Dietz syndrome)

Mutations in smooth muscle actin

Aortic dissection. Microscopic picture



Aortic dissection Case history

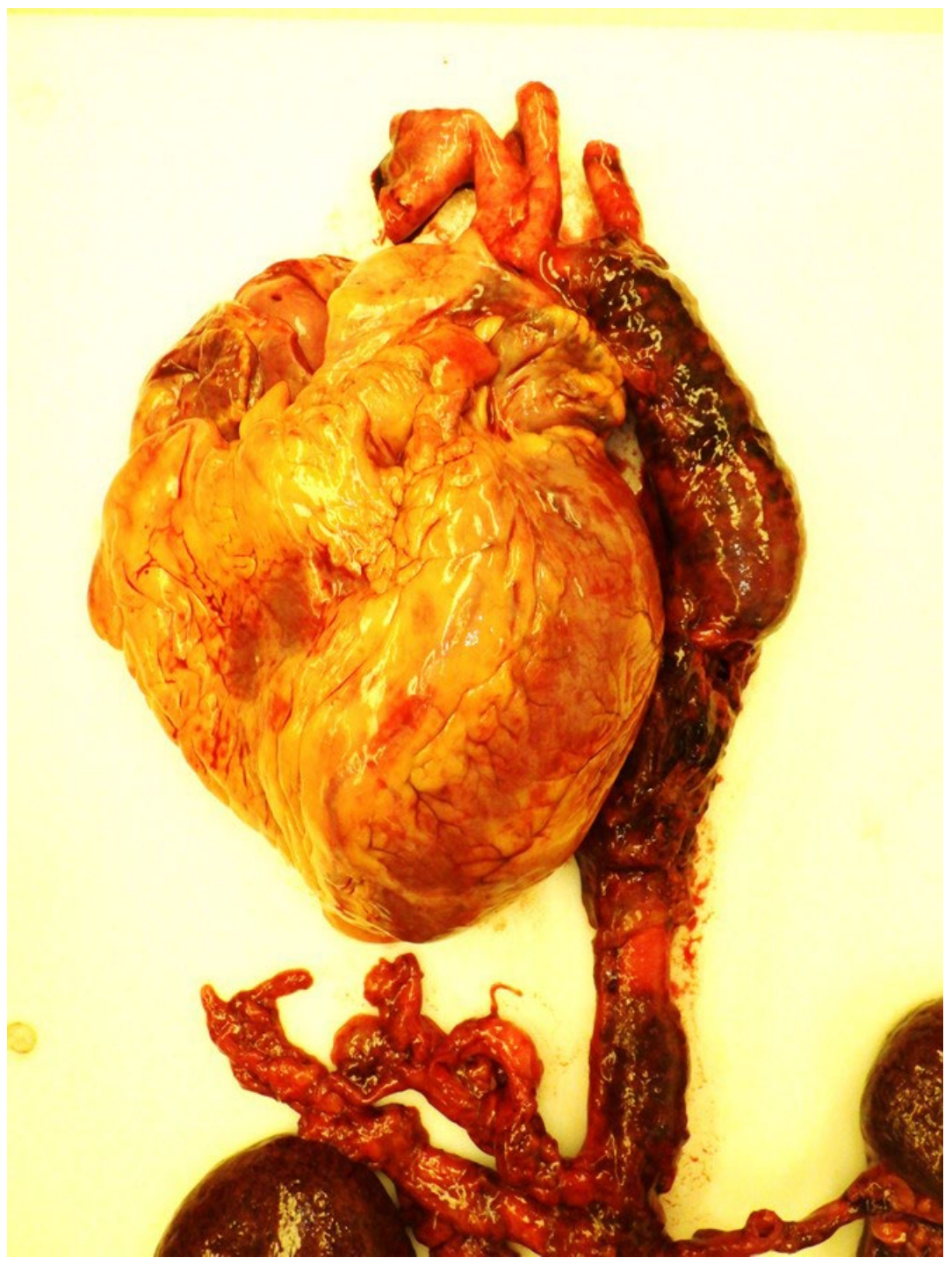
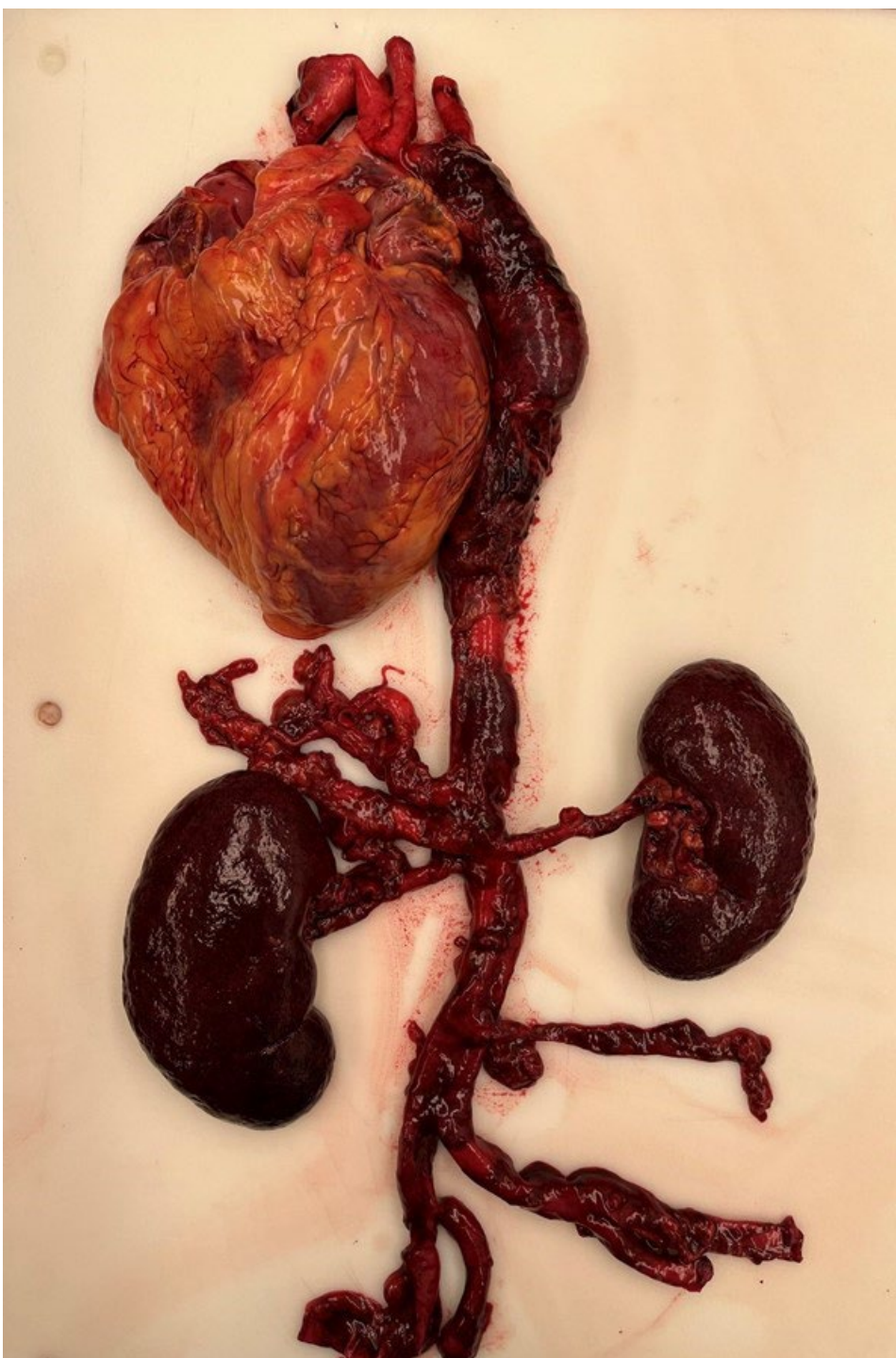
A 46-year-old man

History of hypertension, asthma, and chronic kidney disease

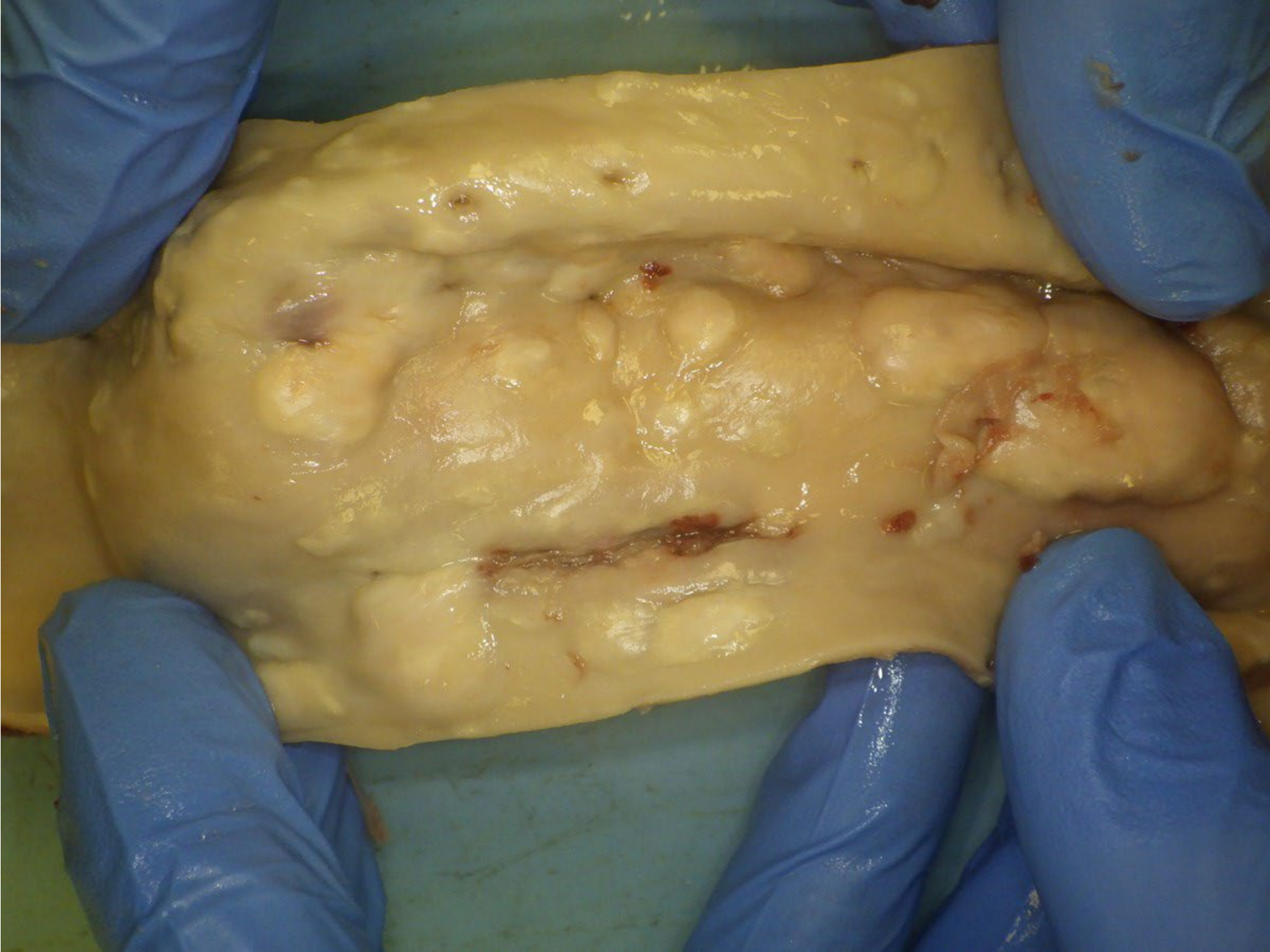
Transferred to OHSU from an outside hospital with a Type B aortic dissection

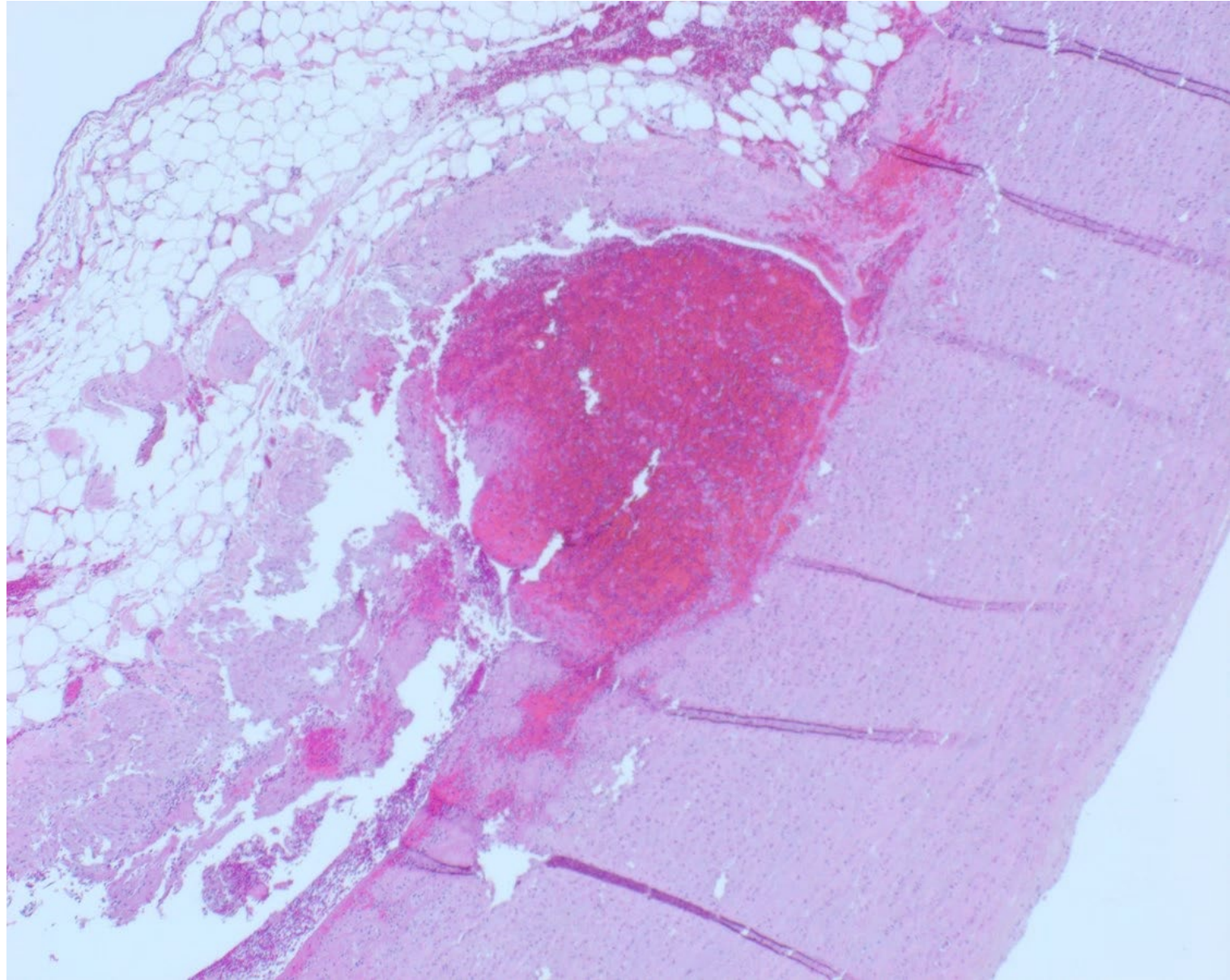
His hospital course was complicated by acute hypoxic respiratory failure,
gastric contents aspiration, and septic shock

He died on the fourth hospital day.







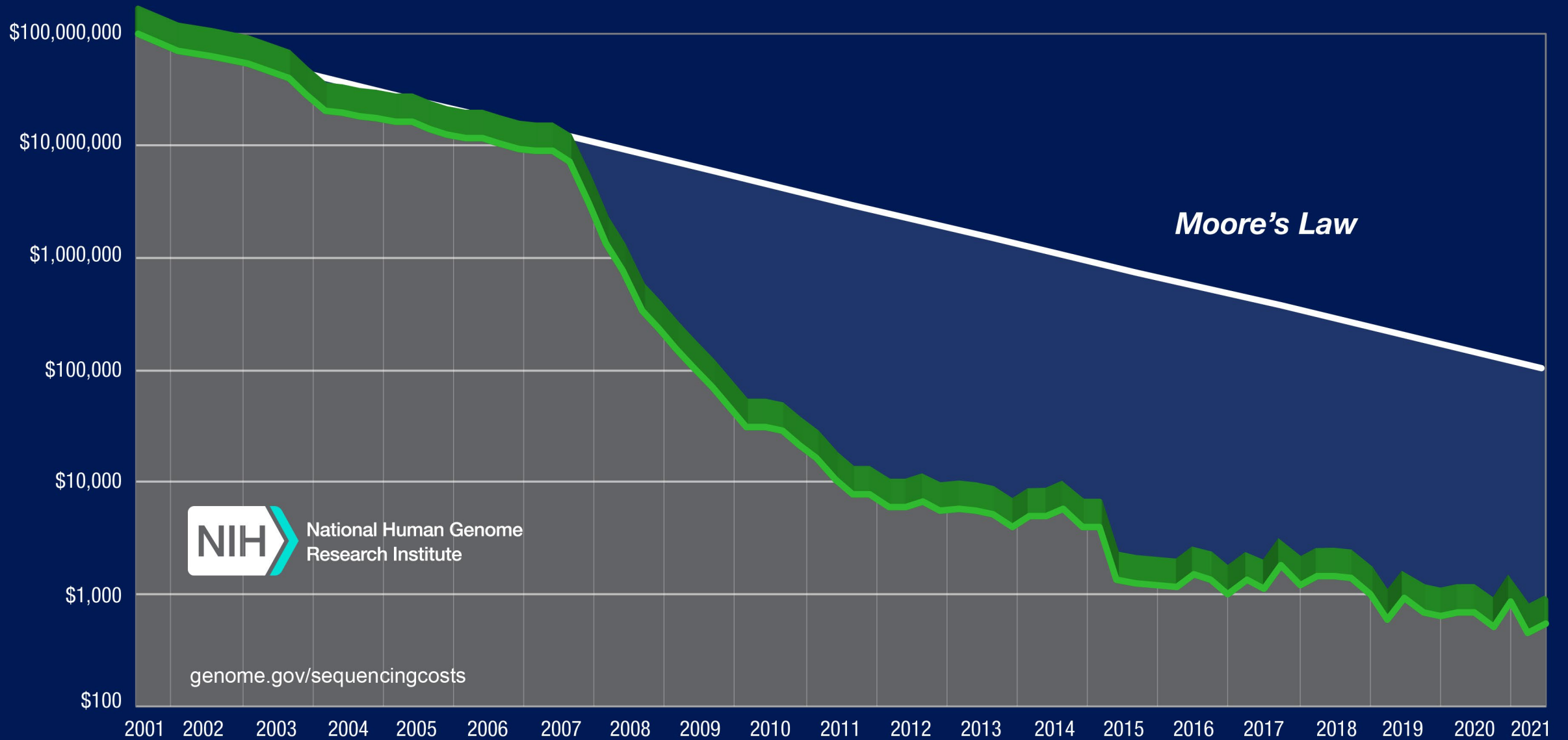


Aortic dissection Case Autopsy diagnosis

- I: Non-hemorrhagic cleavage of the aorta
- II: Aortic dissection (thoracic aorta)
- III: Aortic intramural hemorrhage (abdominal aorta)
- IV: Systemic atherosclerosis with involvement of aorta and coronary arteries

Incomplete cases and the future of autopsy

Cost per Human Genome



NIH National Human Genome Research Institute

genome.gov/sequencingcosts