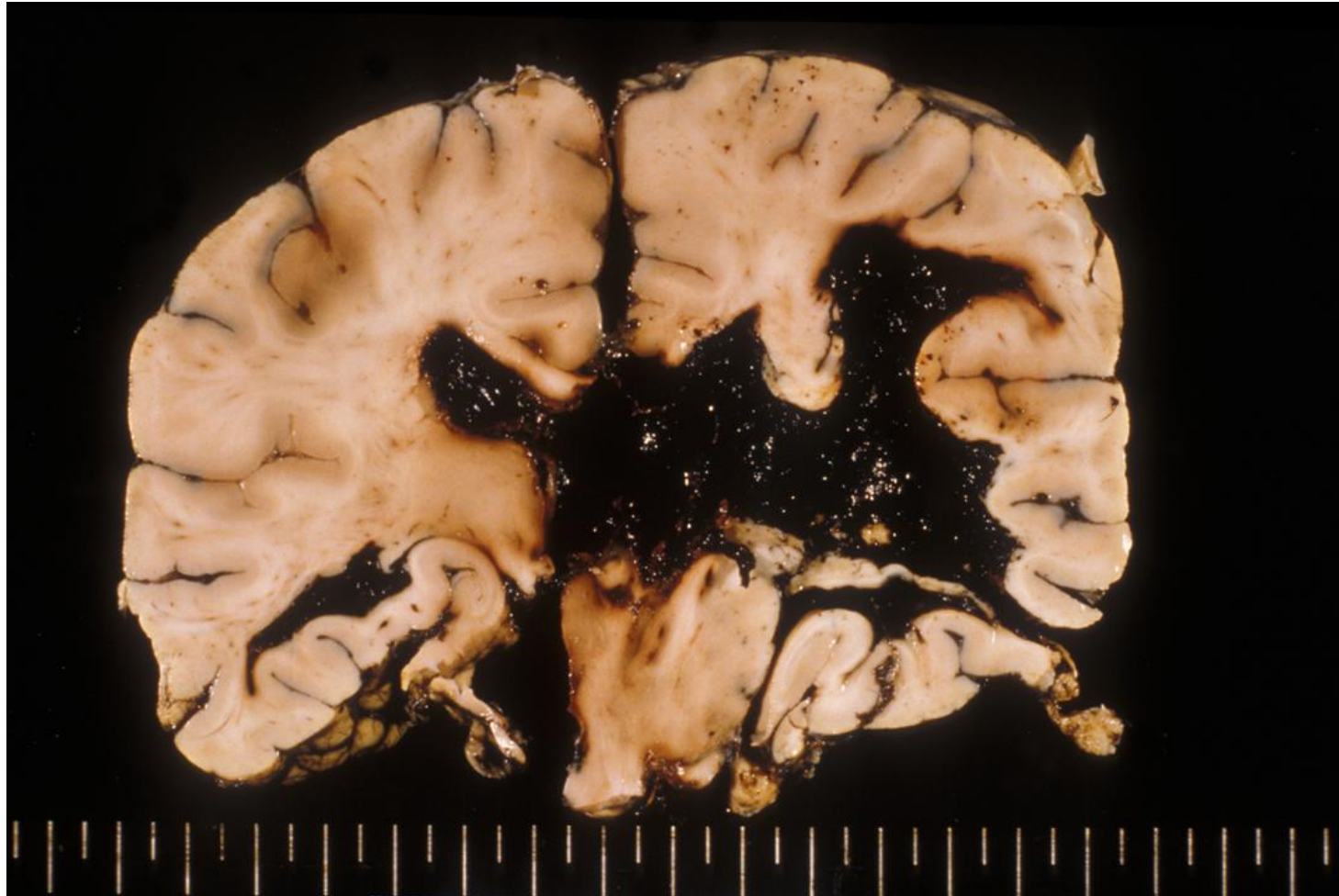


Moyamoya disease (occlusion of Willis arterial circle)

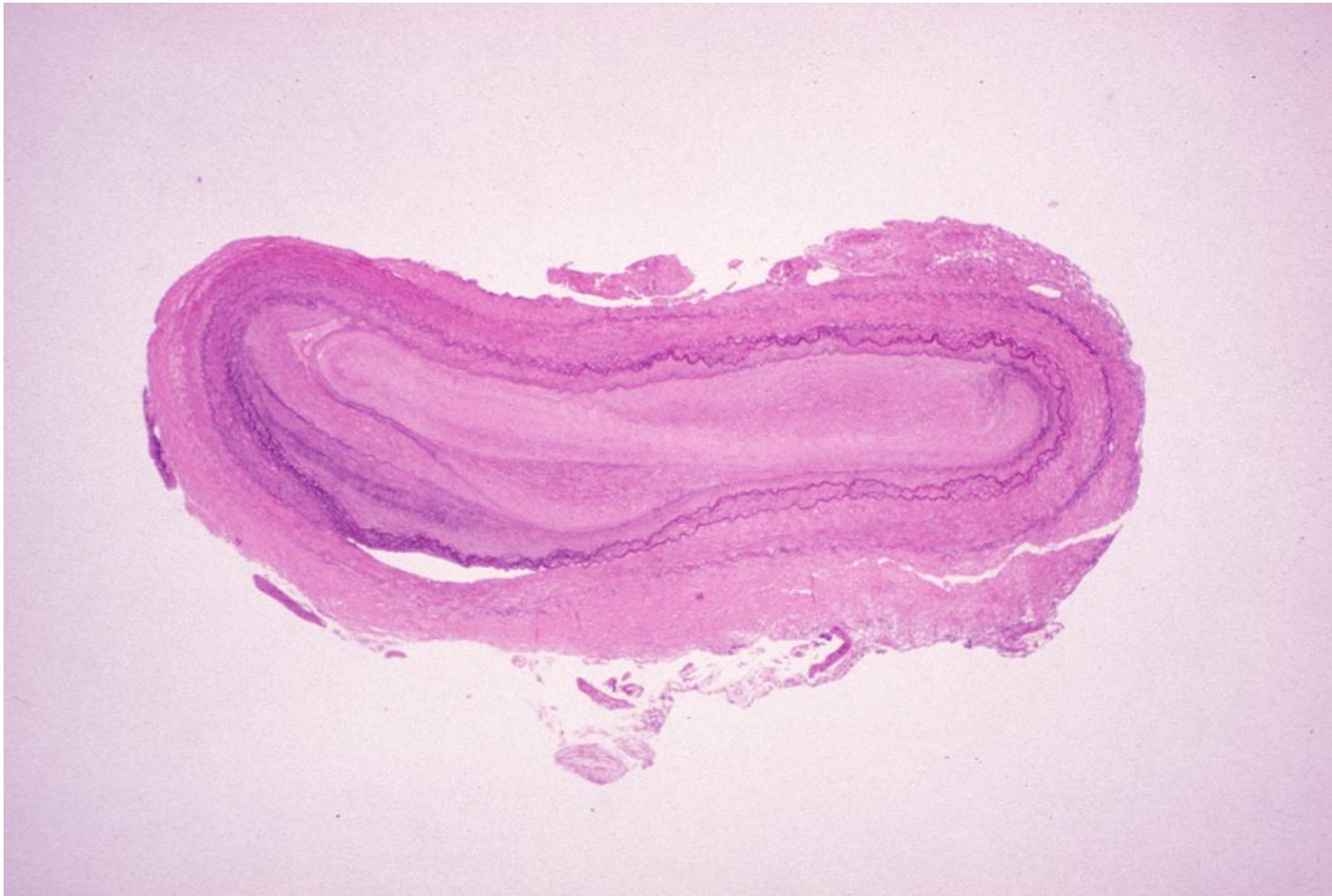
Moyamoya disease (occlusion of Willis arterial circle) is a disease of chronic constriction in the arterial circle of Willis, particularly in the region of the internal carotid artery. Blood flow is blocked by constriction and thrombosis. Collateral circulation develops around the blocked vessels. The collateral vessels are small, weak, and prone to bleeding and thrombosis. On angiographic study, the collateral vessels have the appearance of a "puff of smoke" (moyamoya in Japanese). Moyamoya disease mainly affects adults and tends to cause strokes or bleeding. The gene ring finger protein 213 (RNF213) is closely correlated with the pathogenesis.



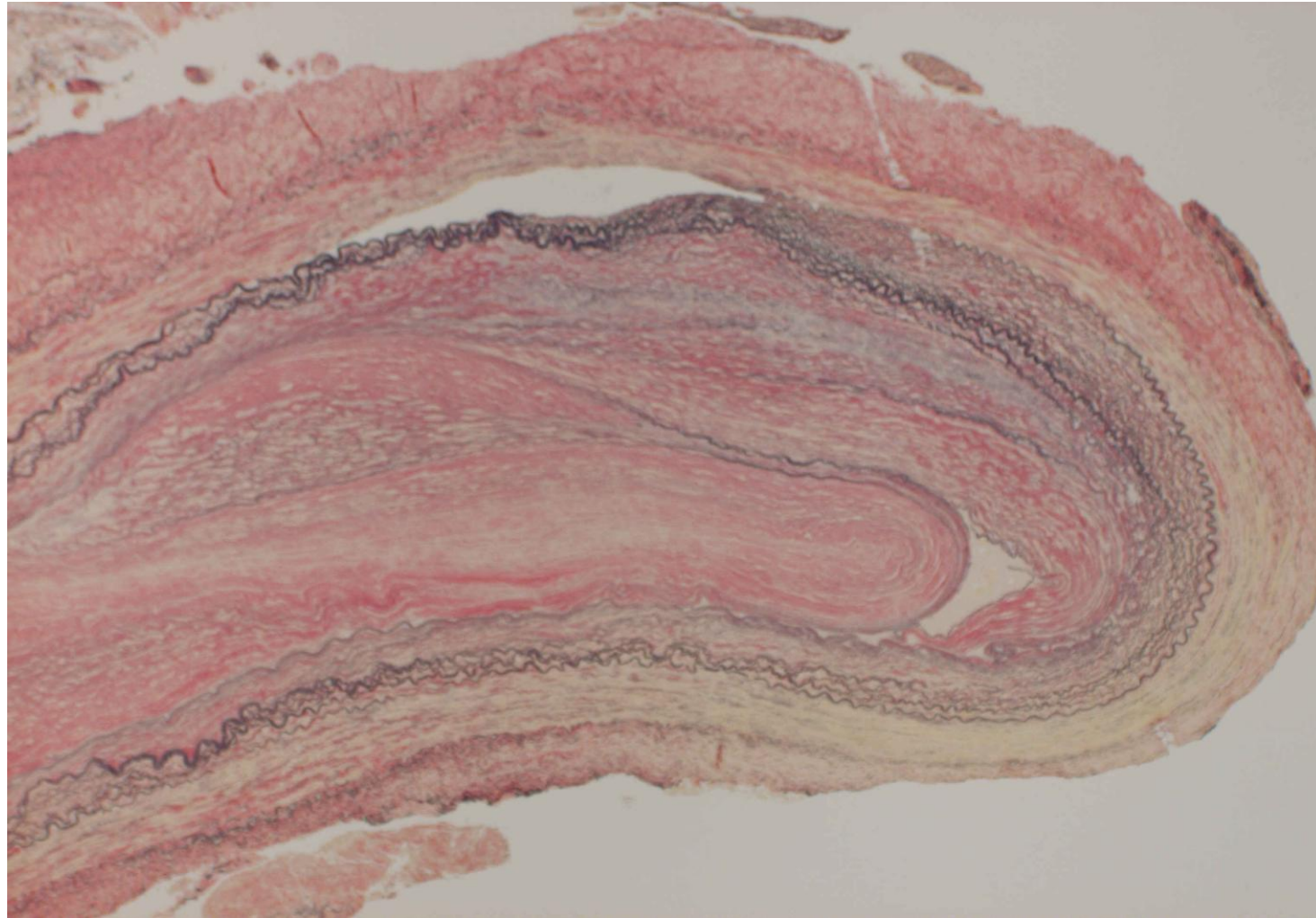
Prepared Willis arterial circle in a female patient aged 40's is shown. Arrowheads indicate internal carotid arteries. Cerebral arteries particularly in the anterior part of the circle are thinned.



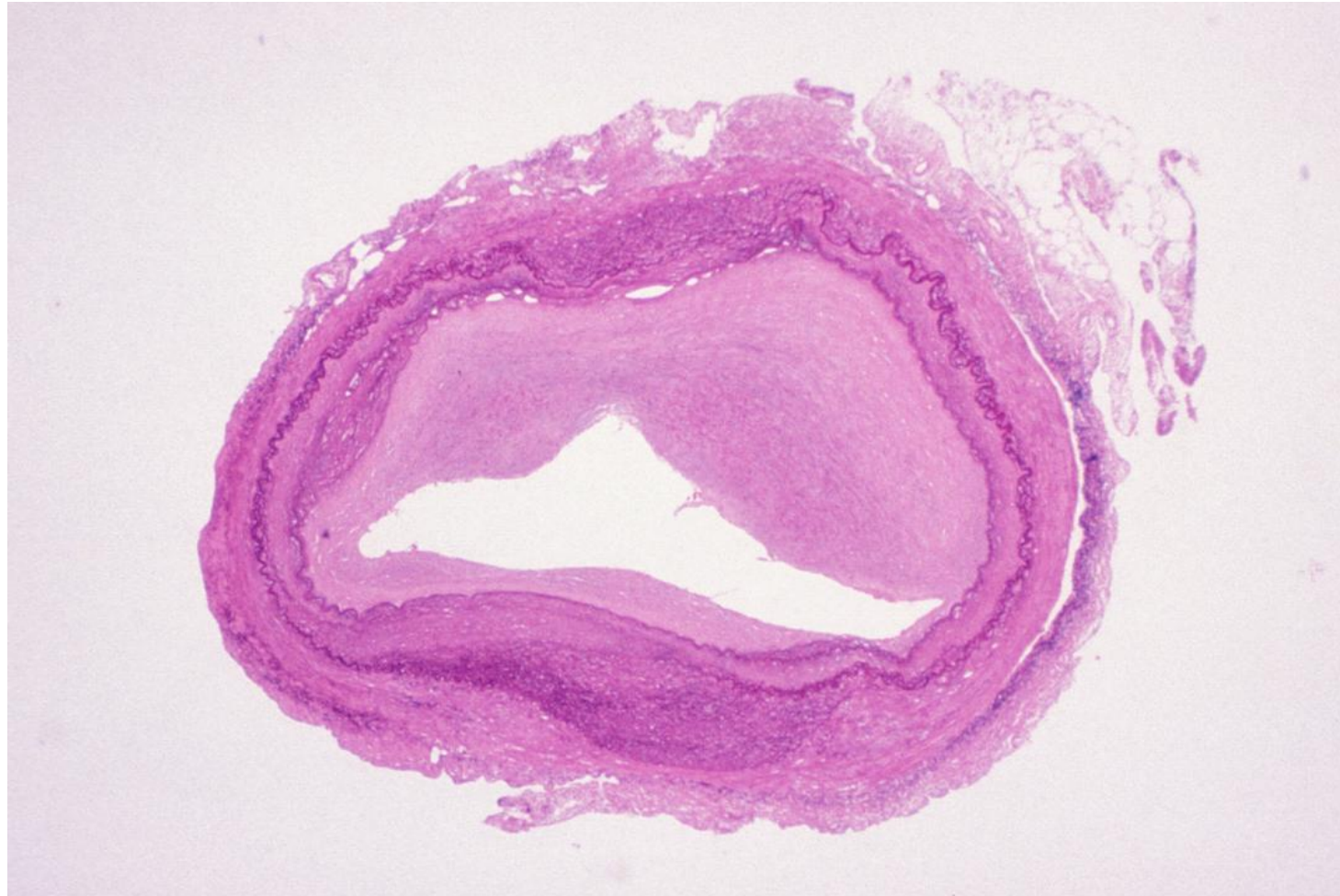
Massive cerebral hemorrhage in the right cerebral hemisphere has caused death in a female patient aged 40's.



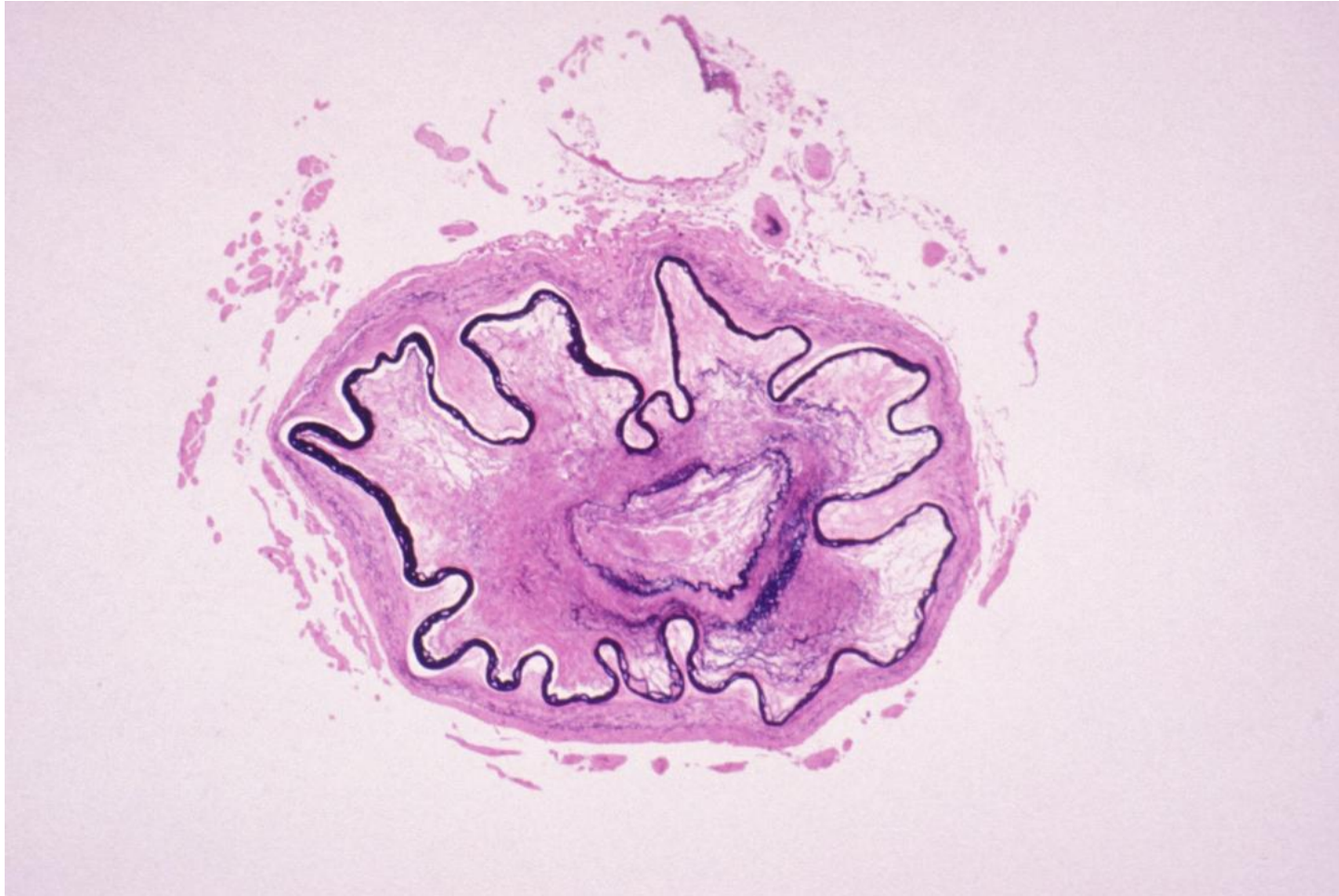
Complete luminal occlusion of the left internal carotid artery is evident (a female patient aged 40's). VB-HE-1



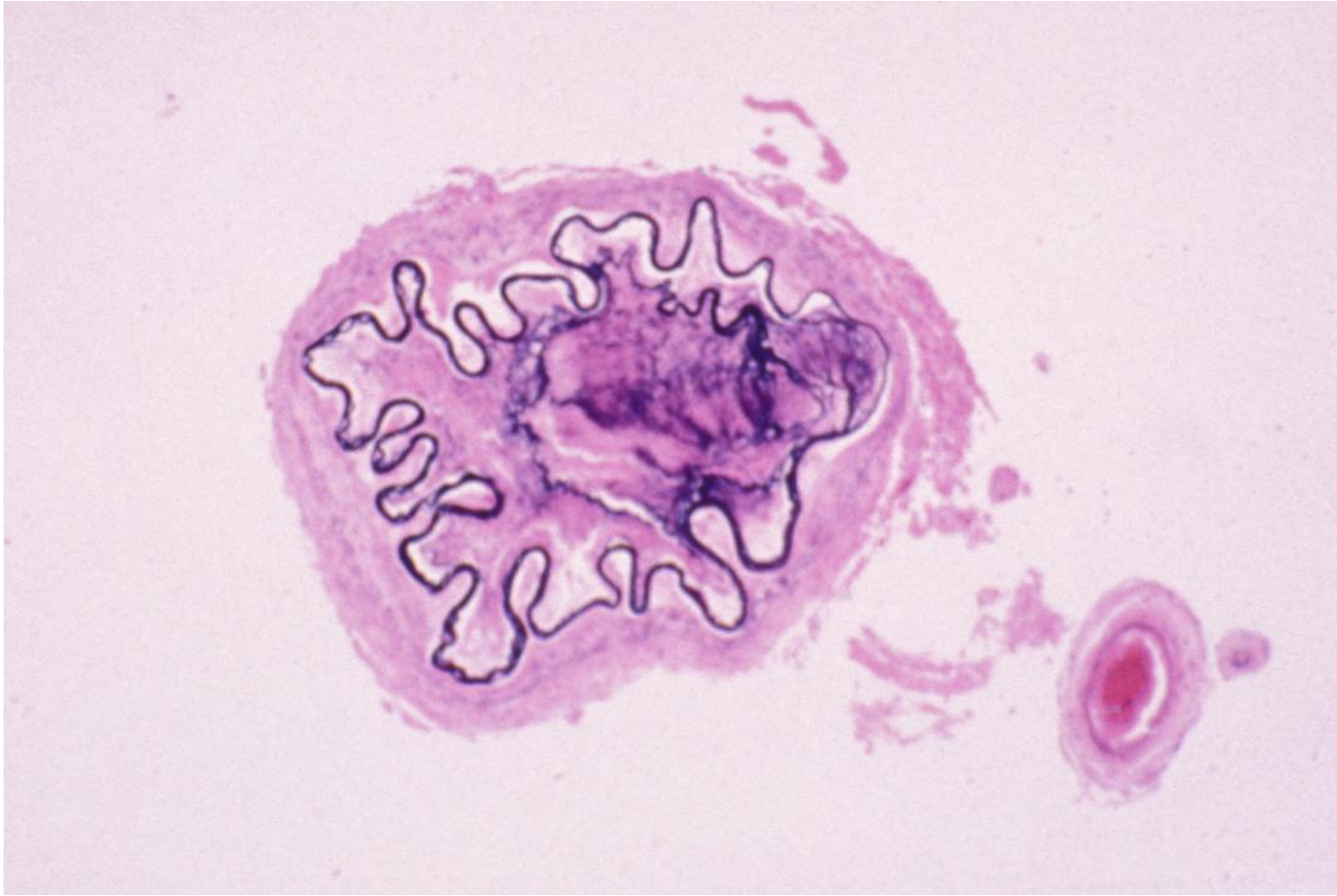
Complete luminal occlusion of the left internal carotid artery is evident (a female patient aged 40's). EVG-1



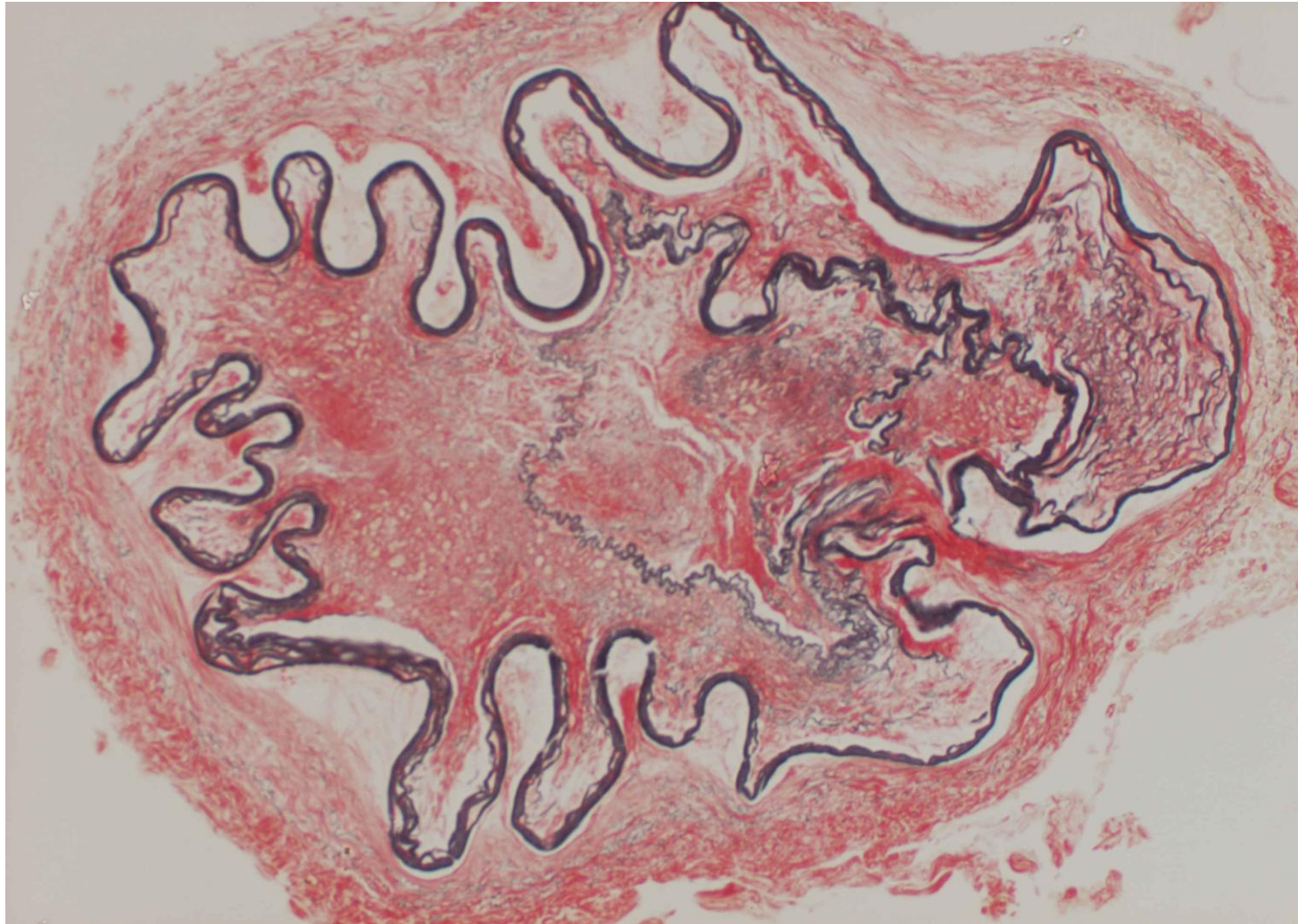
Intimal fibrous thickening is seen in the right internal carotid artery (a female patient aged 40's). VB-HE-2



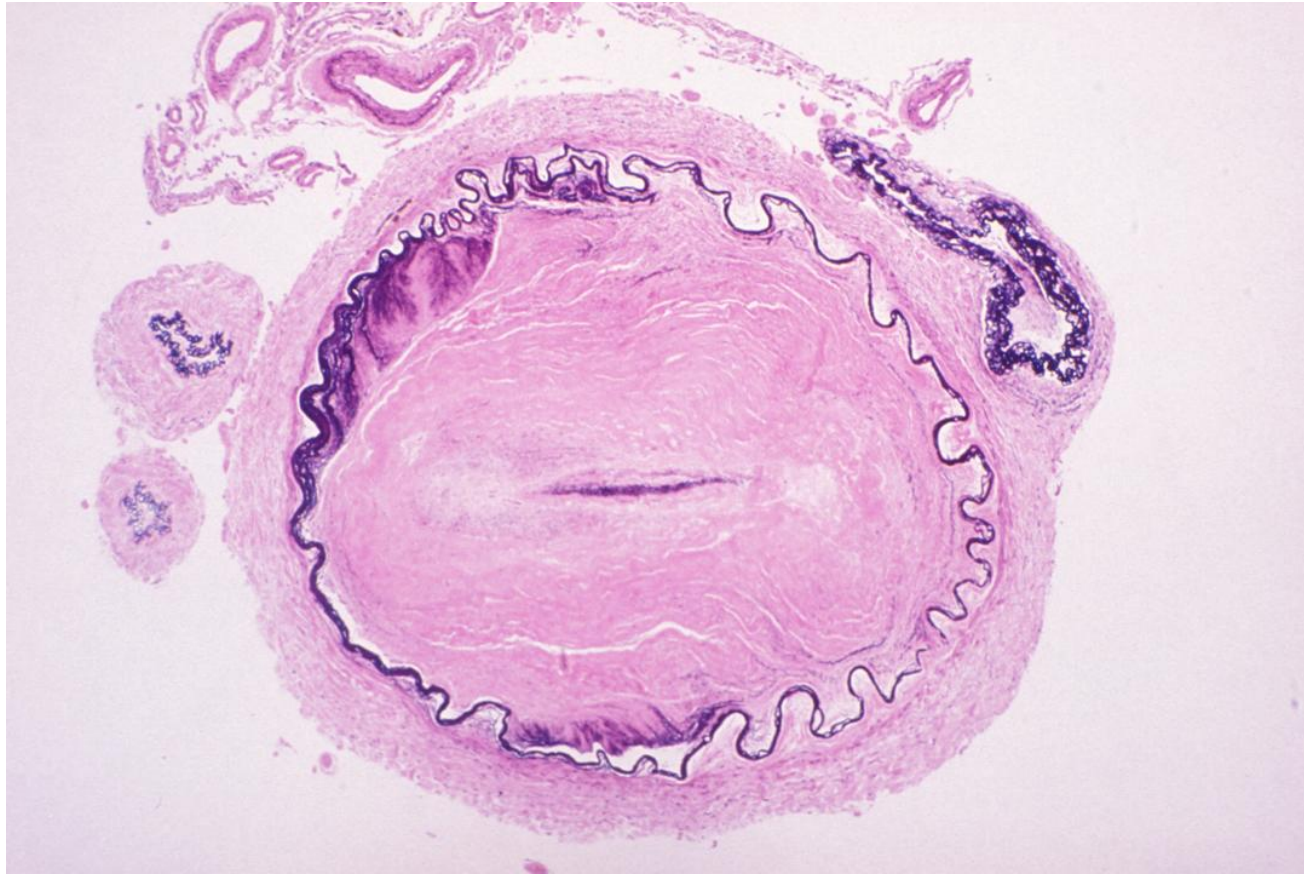
Complete luminal occlusion of the left anterior cerebral artery is shown (a female patient aged 40's). VB-HE-3



Complete luminal occlusion of the right anterior cerebral artery is shown (a female patient aged 40's). VB-HE-4



Complete luminal occlusion of the right anterior cerebral artery is shown (a female patient aged 40's). EVG-2



Complete luminal occlusion of the left posterior cerebral artery is shown (a female patient aged 40's). VB-HE-5



Complete luminal occlusion of the right posterior cerebral artery is shown (a female patient aged 40's). VB-HE-5