

113年度高病原性禽流感 禽場肉眼與組織病變

國立屏東科技大學 獸醫學系

陳雅媚 助理教授

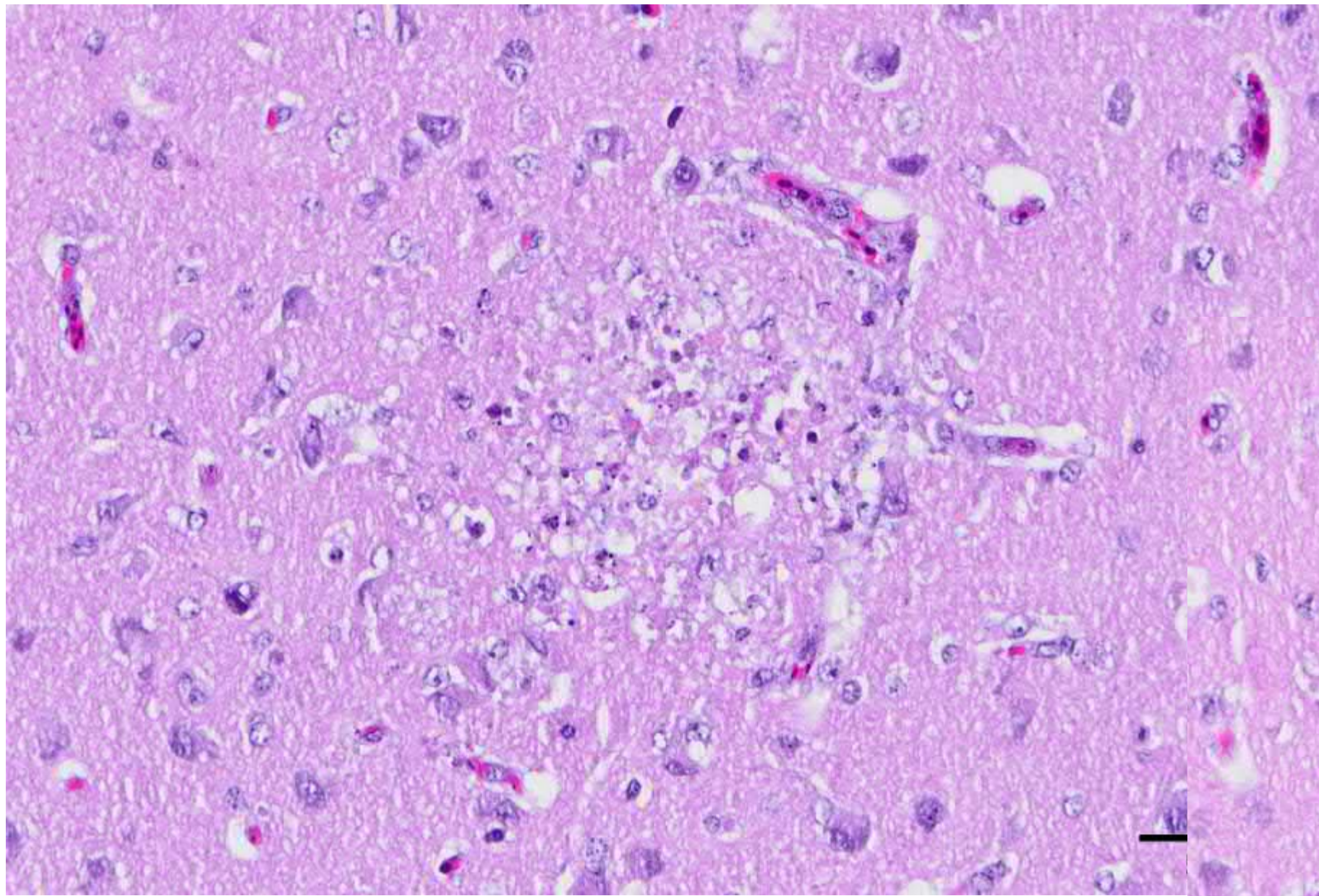
113年04月30日

Results

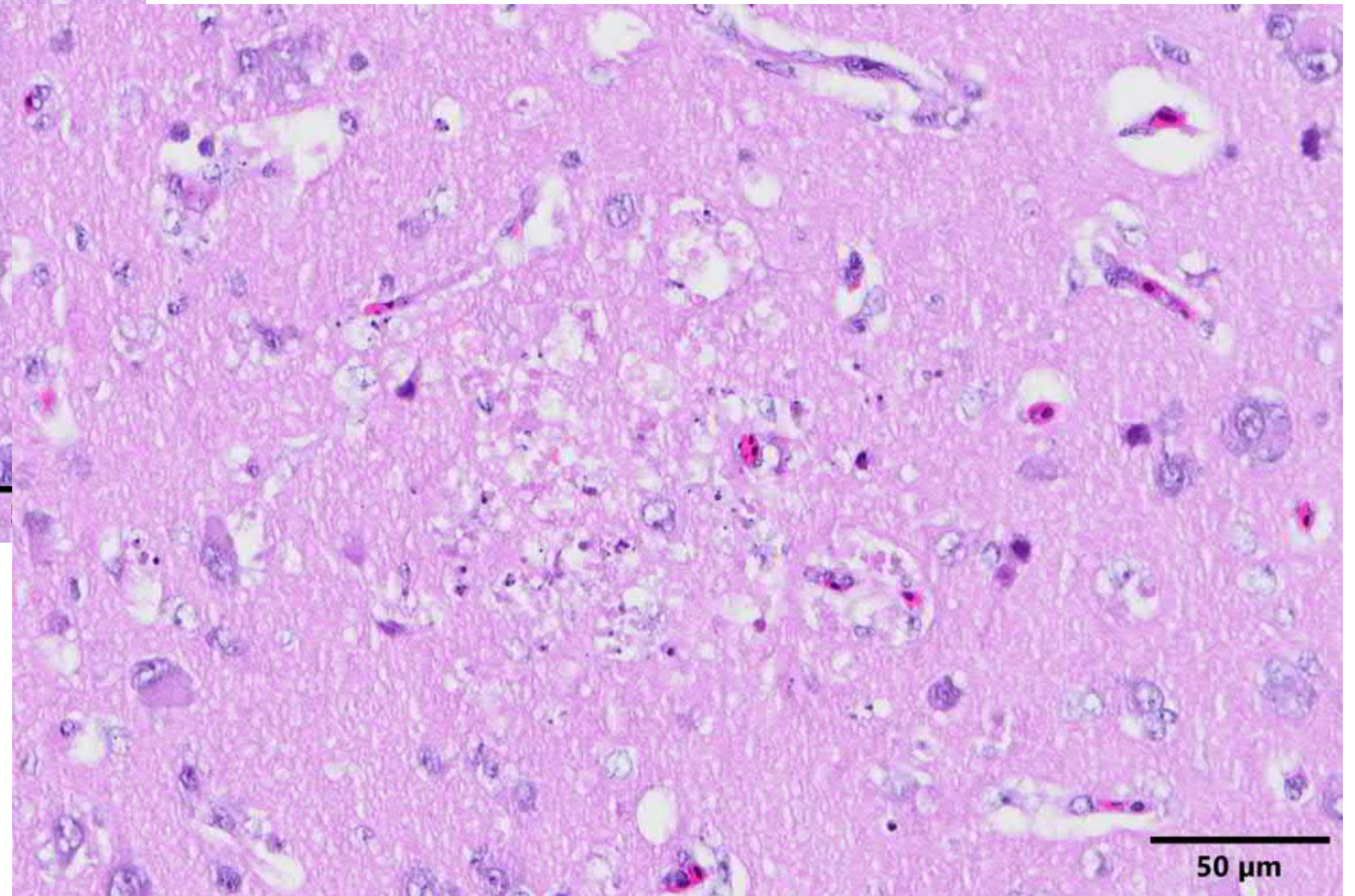
- 112年10月1日至113年3月7日，共計21場病例。
 - 雞(紅羽土雞、黑羽土雞、皇金雞、蛋雞)13例
 - 鵝(種鵝、肉鵝) 4例
 - 鴨(肉鴨) 3例
 - 鵪鶉 1例

雞

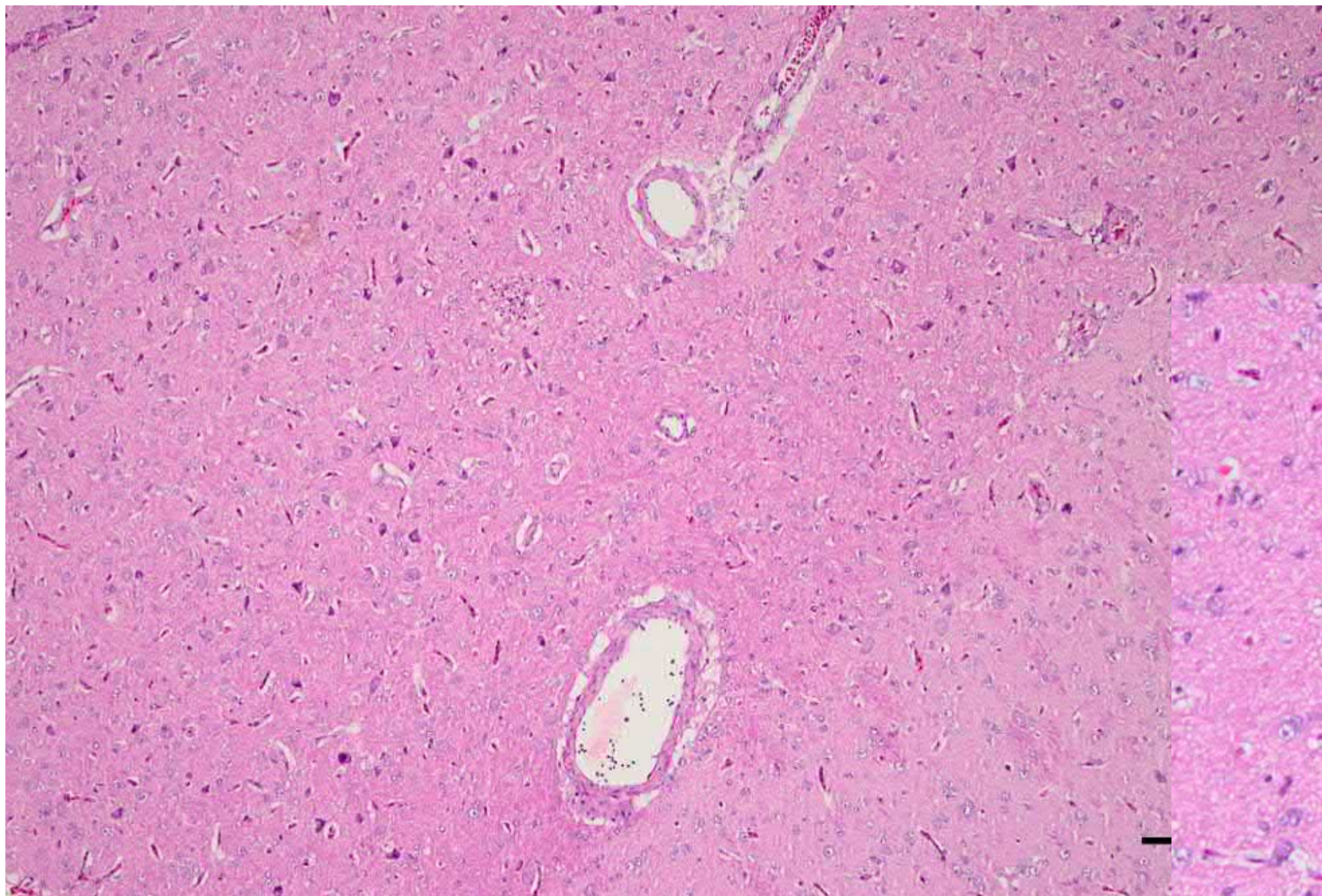
- 臨床症狀與外觀：精神沉鬱、偶見腳脛潮紅以及神經症狀
- 肉眼病變：腦血管怒張、心臟塌陷、心囊積液、心外膜斑駁、腎腫大、肌腺胃黏膜糜爛、胰臟出血、肌肉出血



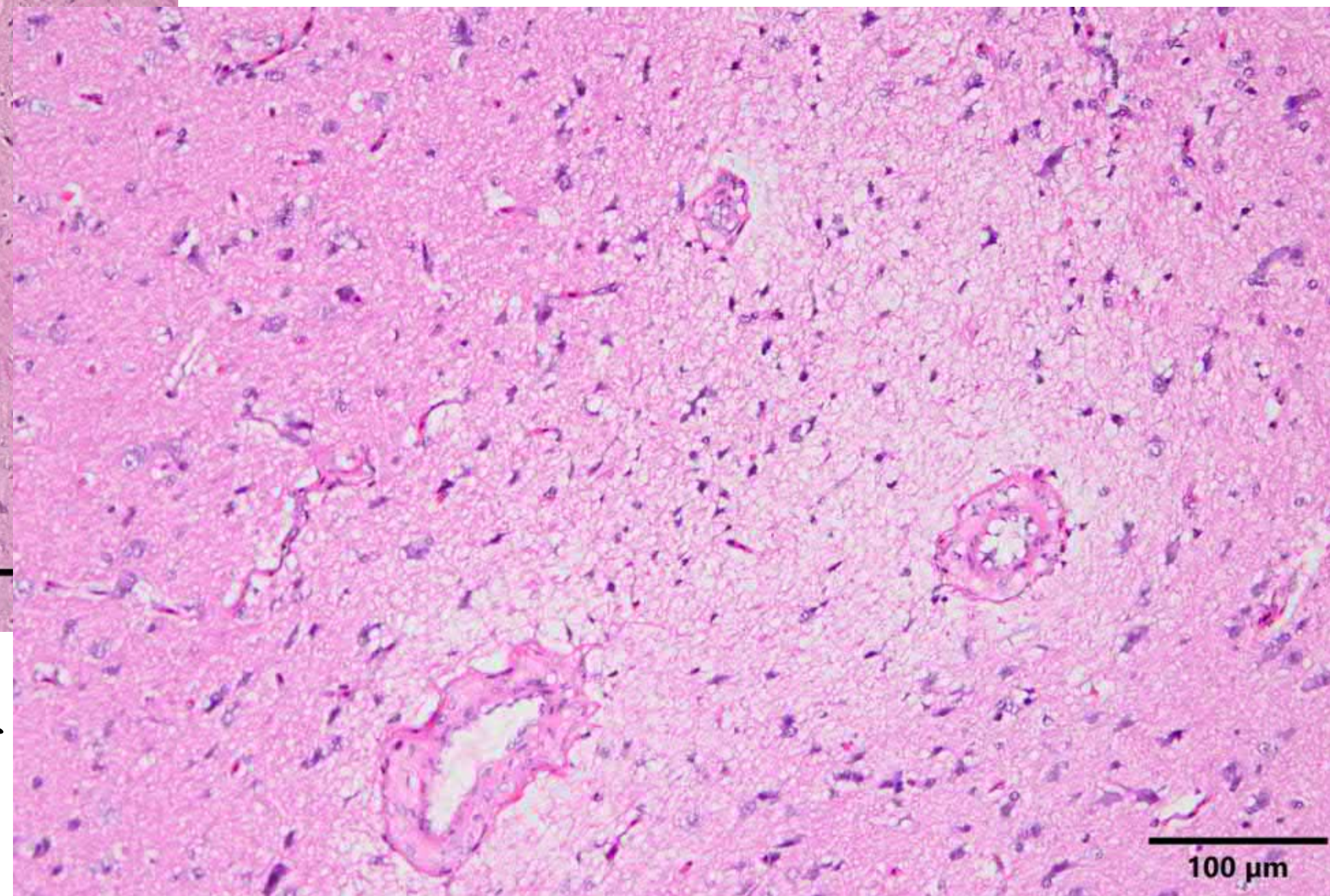
大腦實質：局部壞死



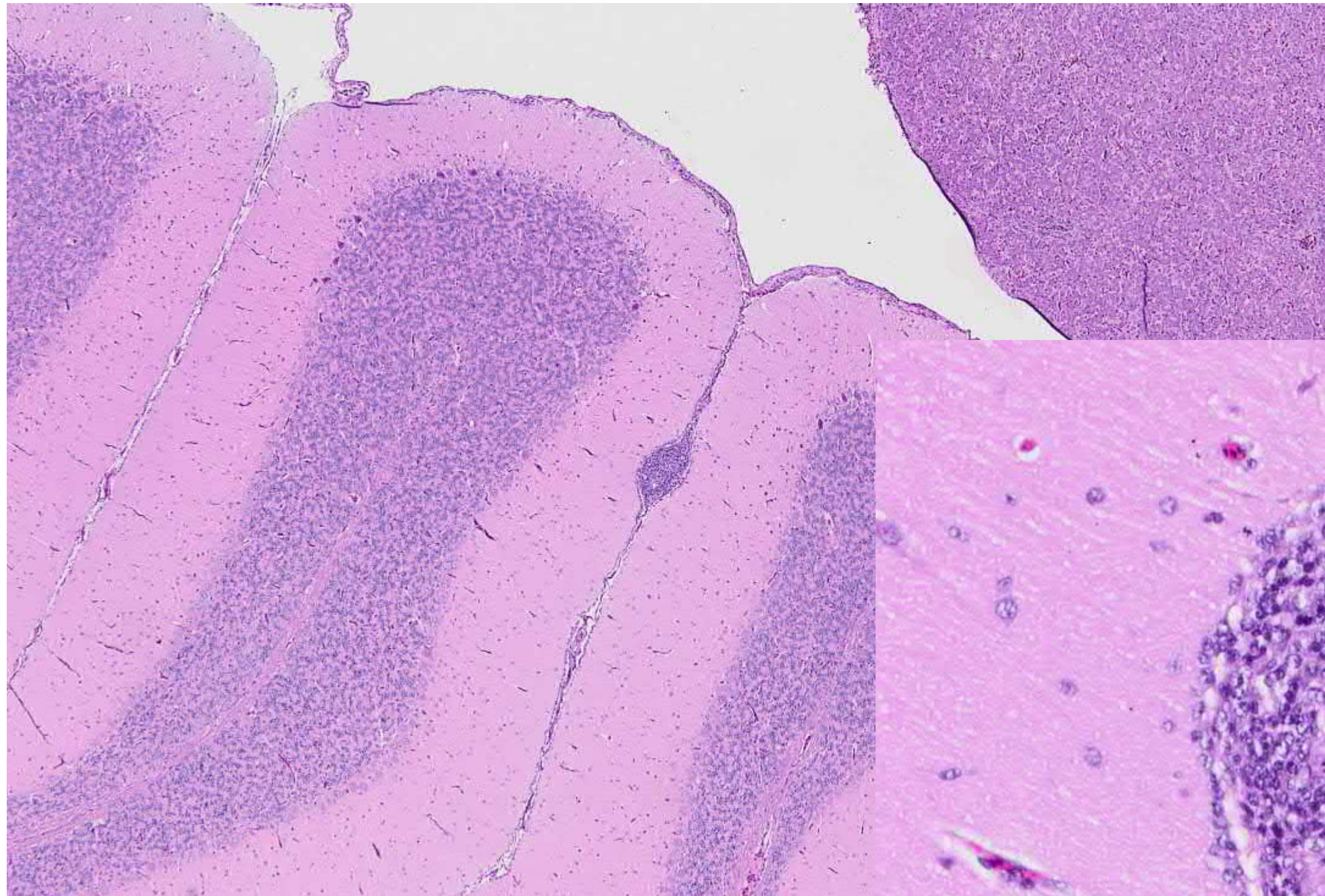
大腦實質：局部壞死



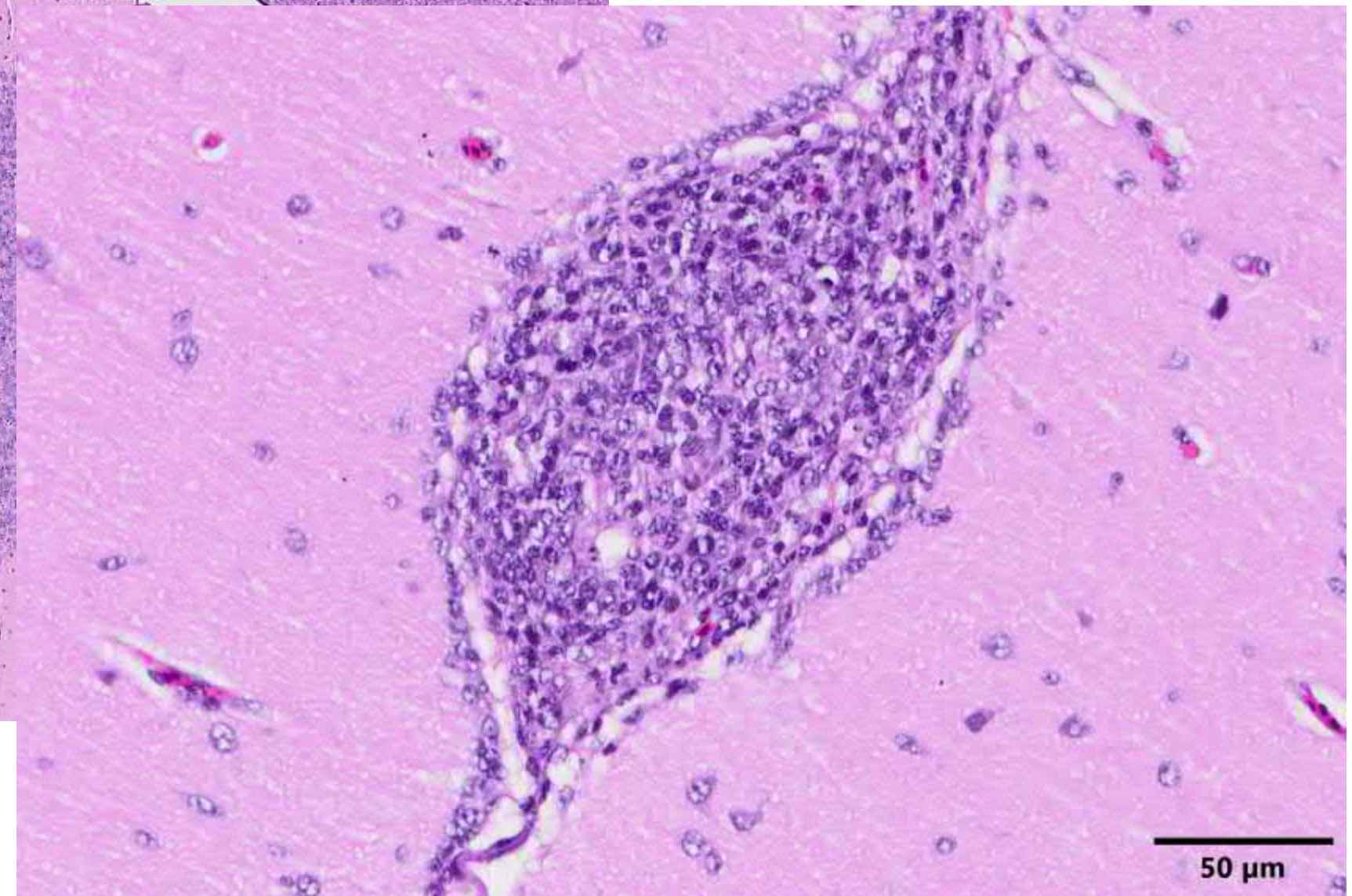
大腦：局部實質壞死、血管周邊水腫



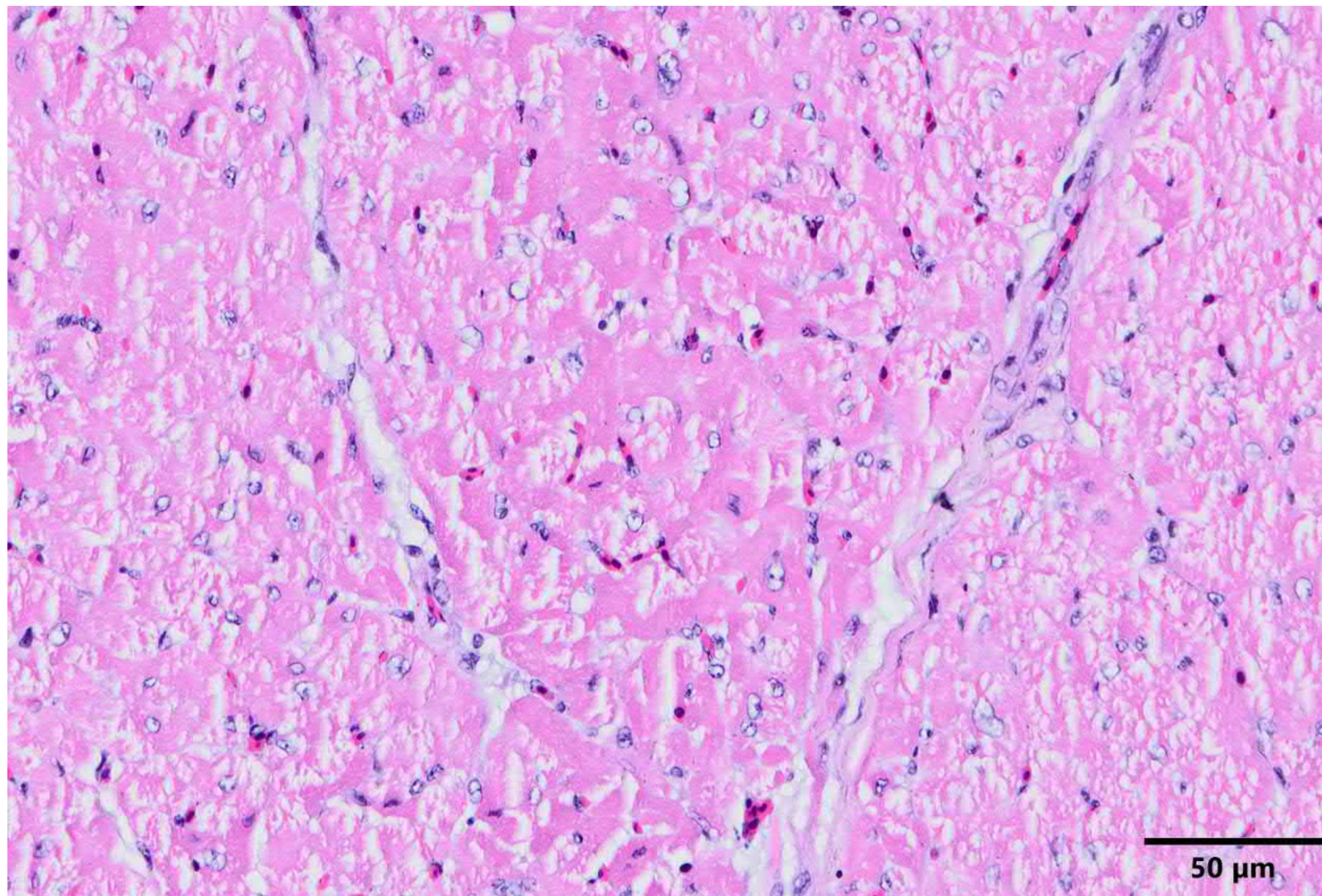
大腦：血管周邊水腫



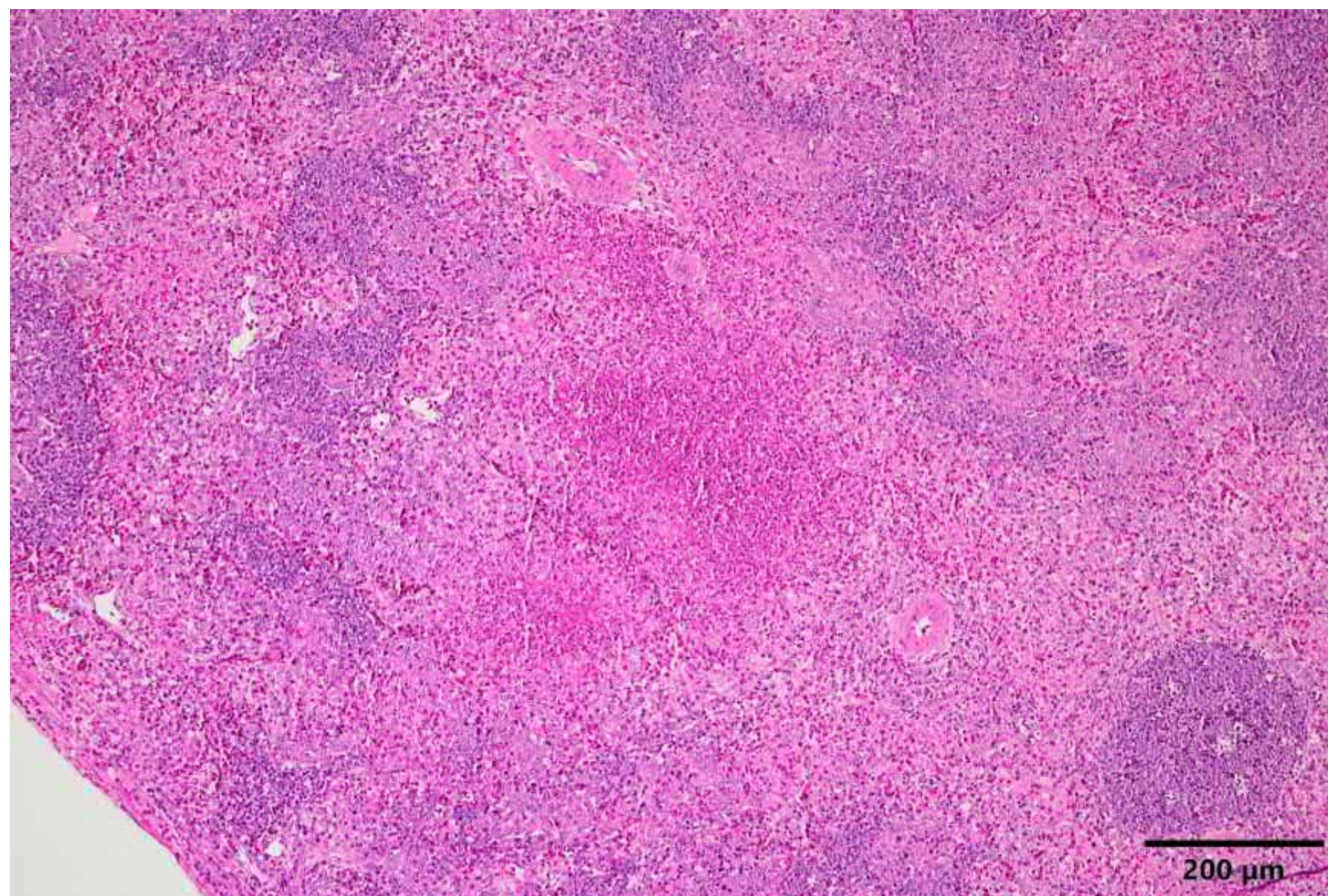
小腦：局部淋巴球性腦膜炎



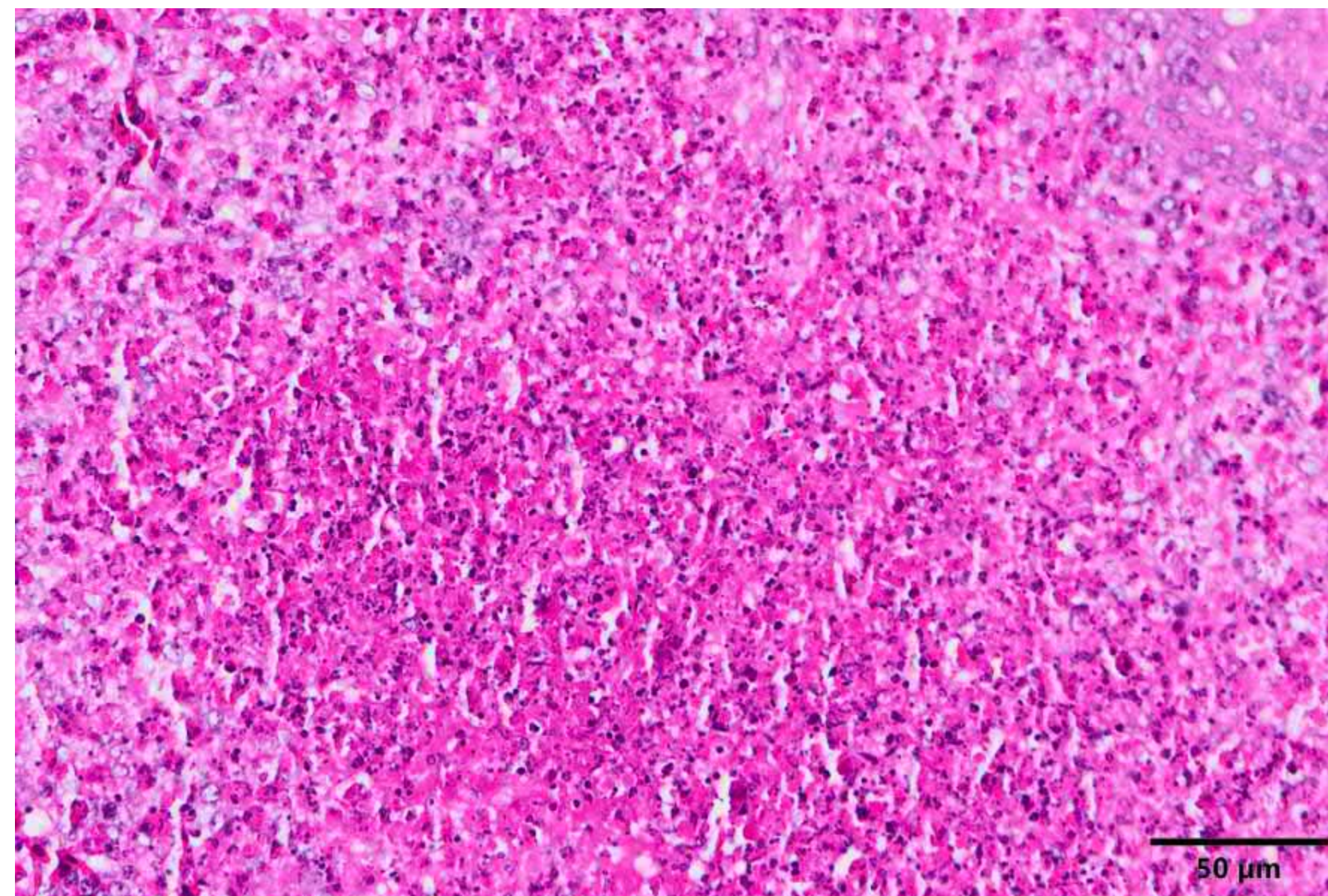
小腦：局部淋巴球性腦膜炎



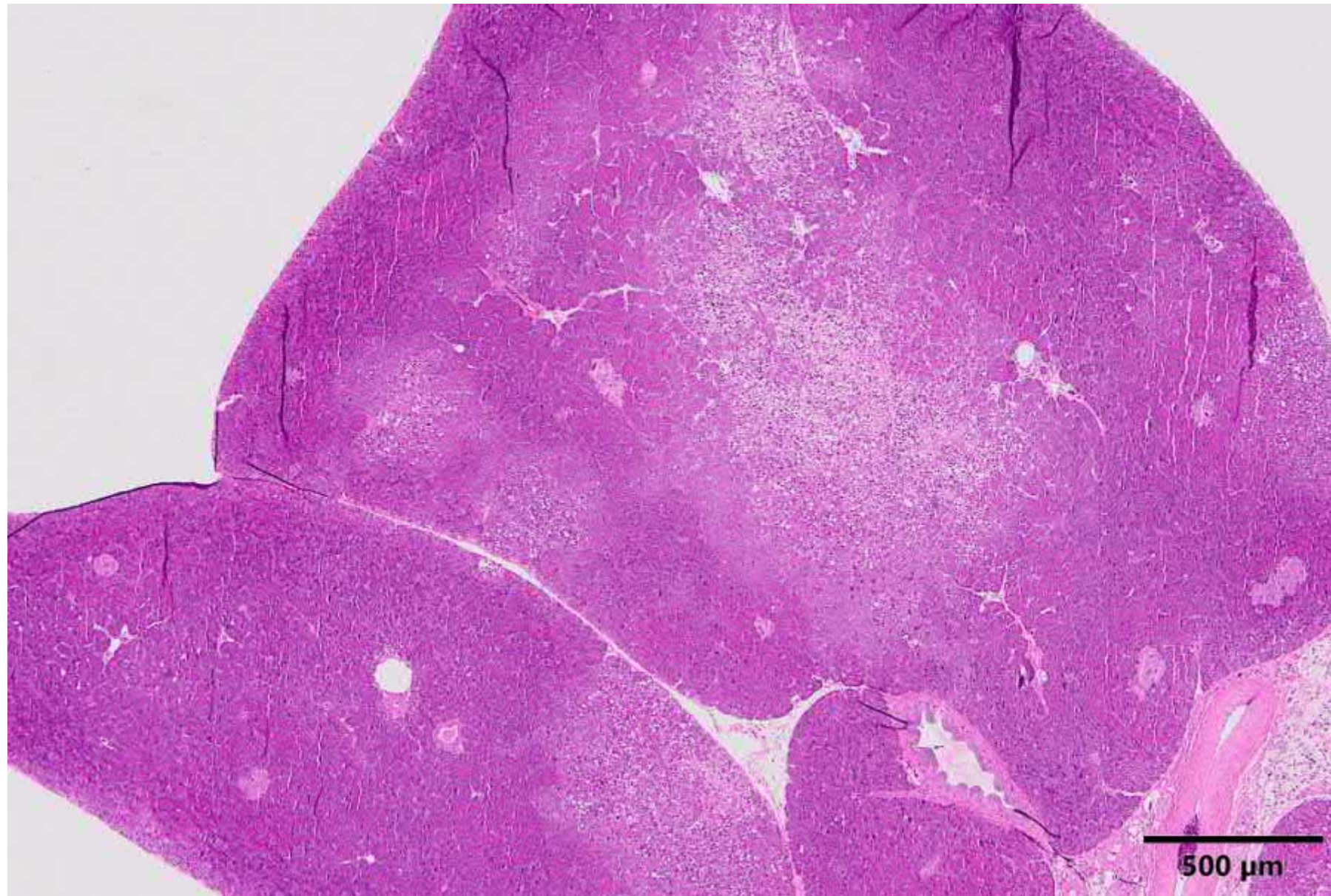
心肌：局部輕微心肌變性



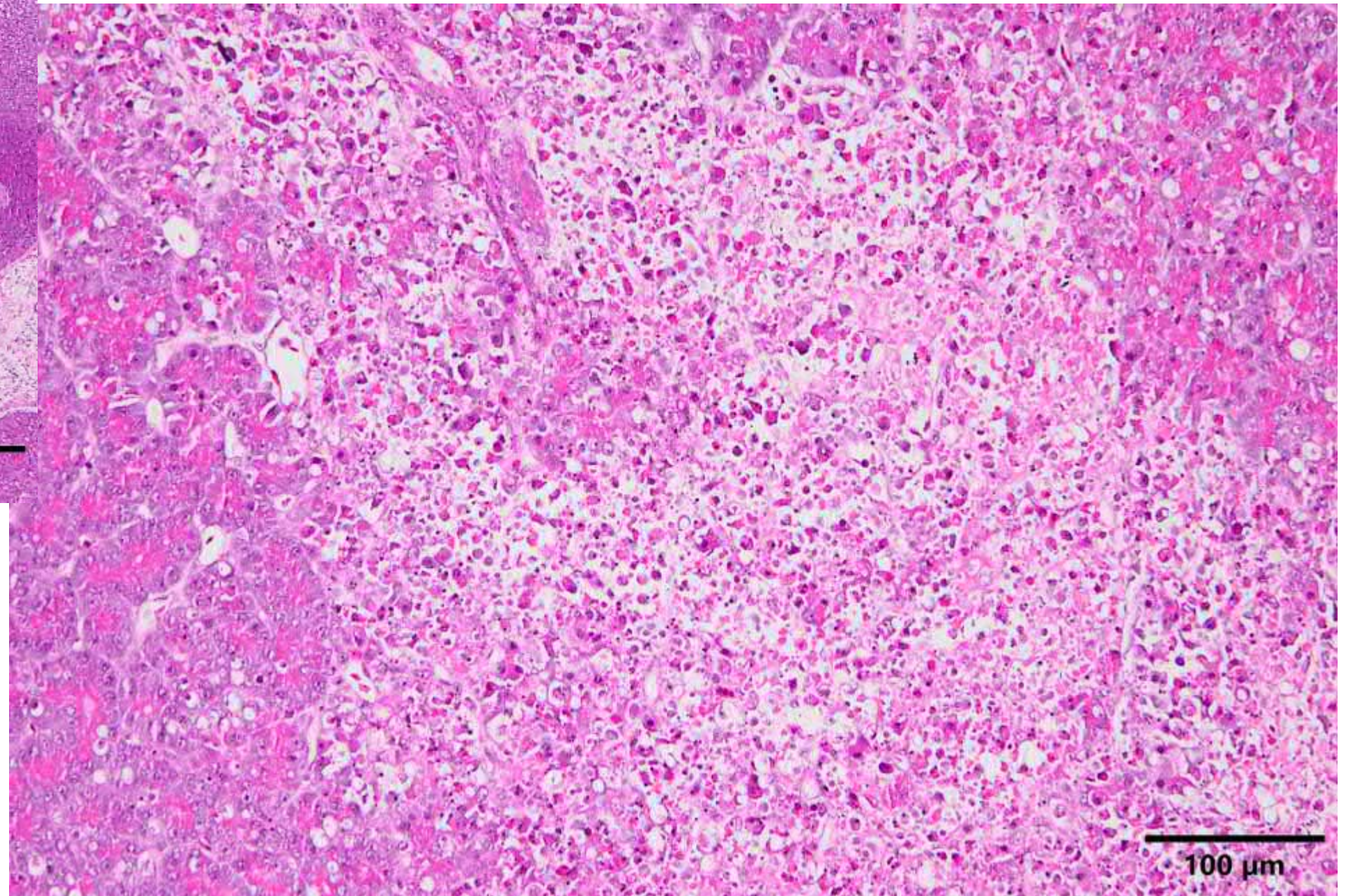
脾臟：局部廣泛實質壞死



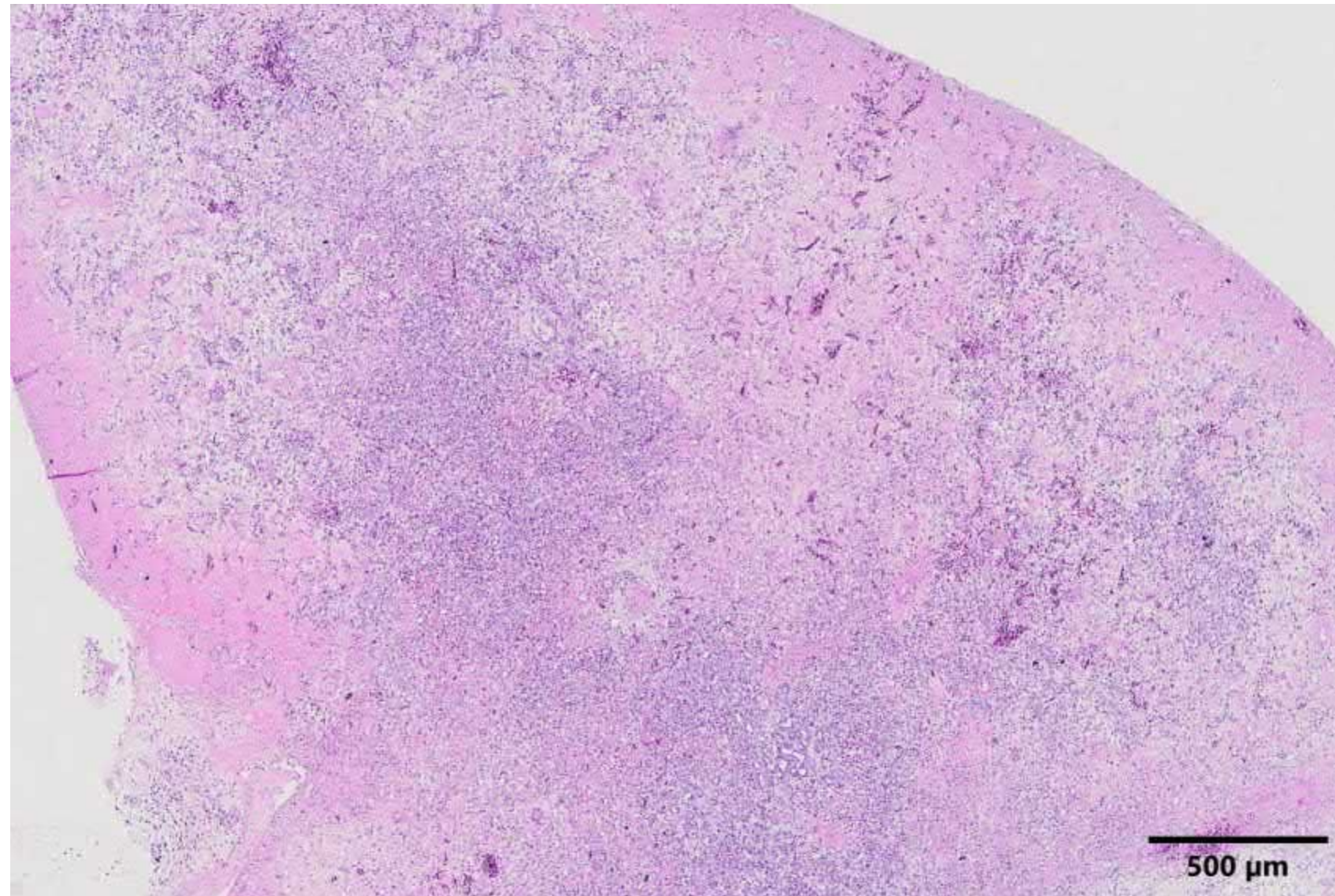
脾臟：局部廣泛實質壞死



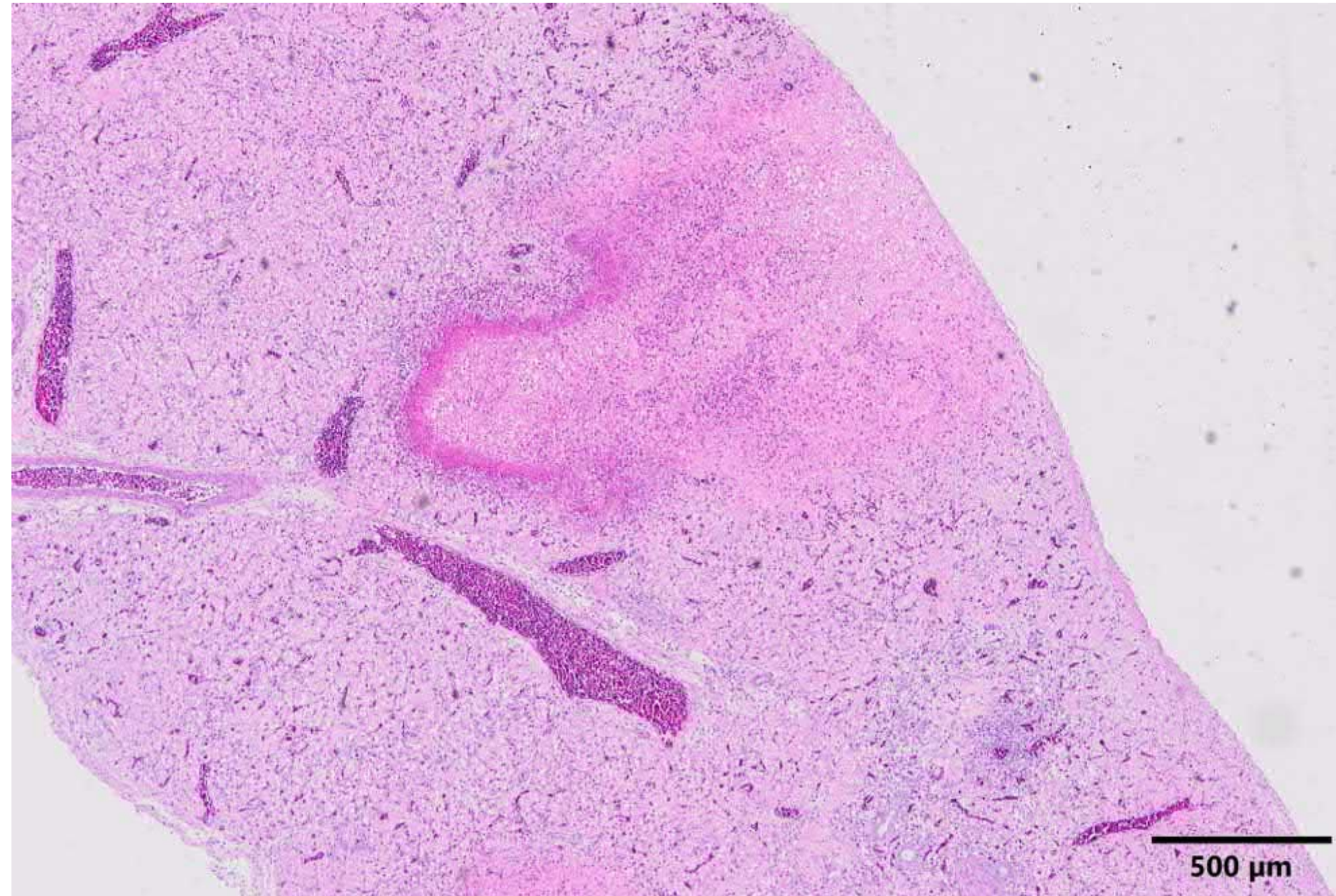
胰臟：多發局部實質壞死



胰臟：多發局部實質壞死



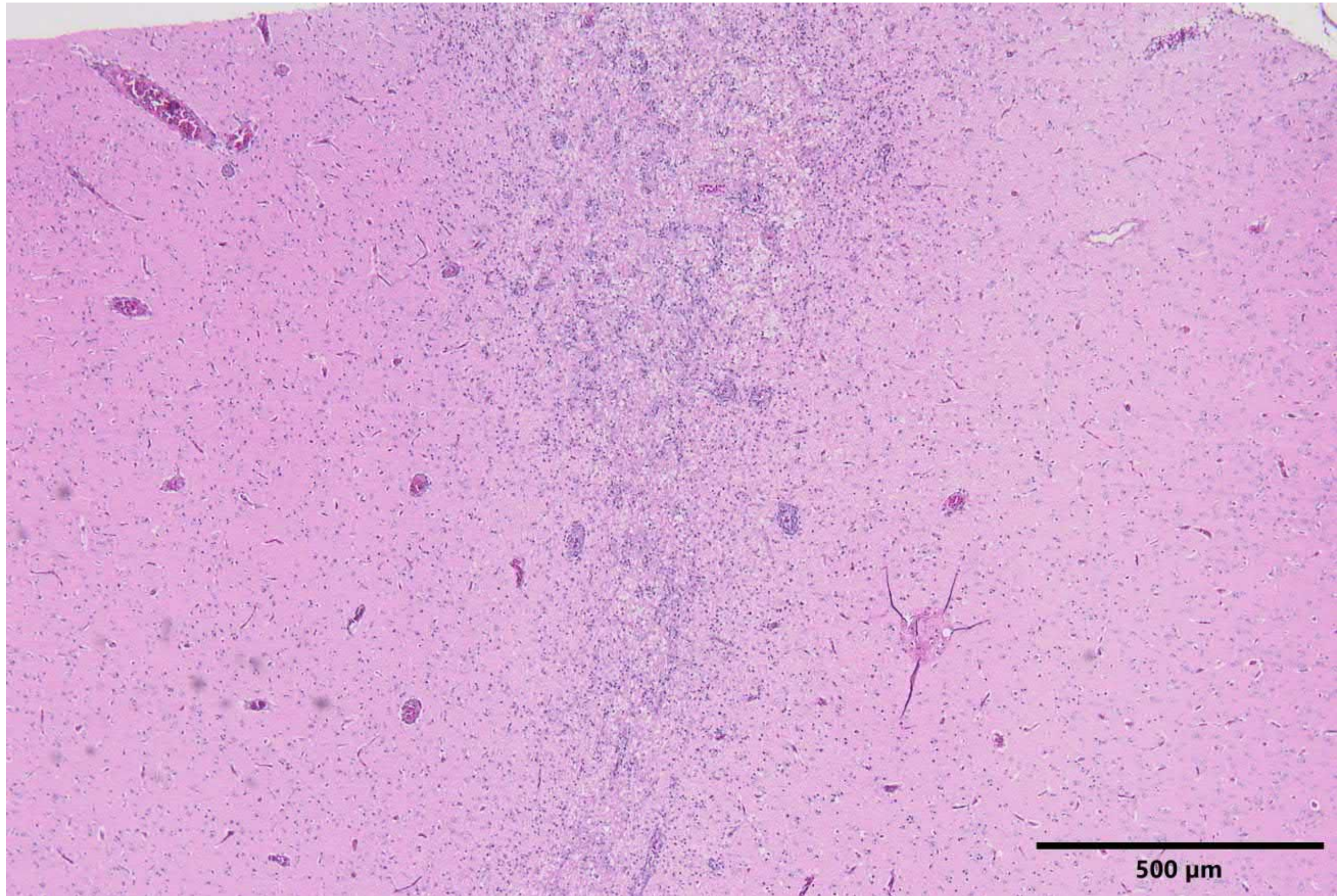
胰臟：嚴重瀰漫實質壞死



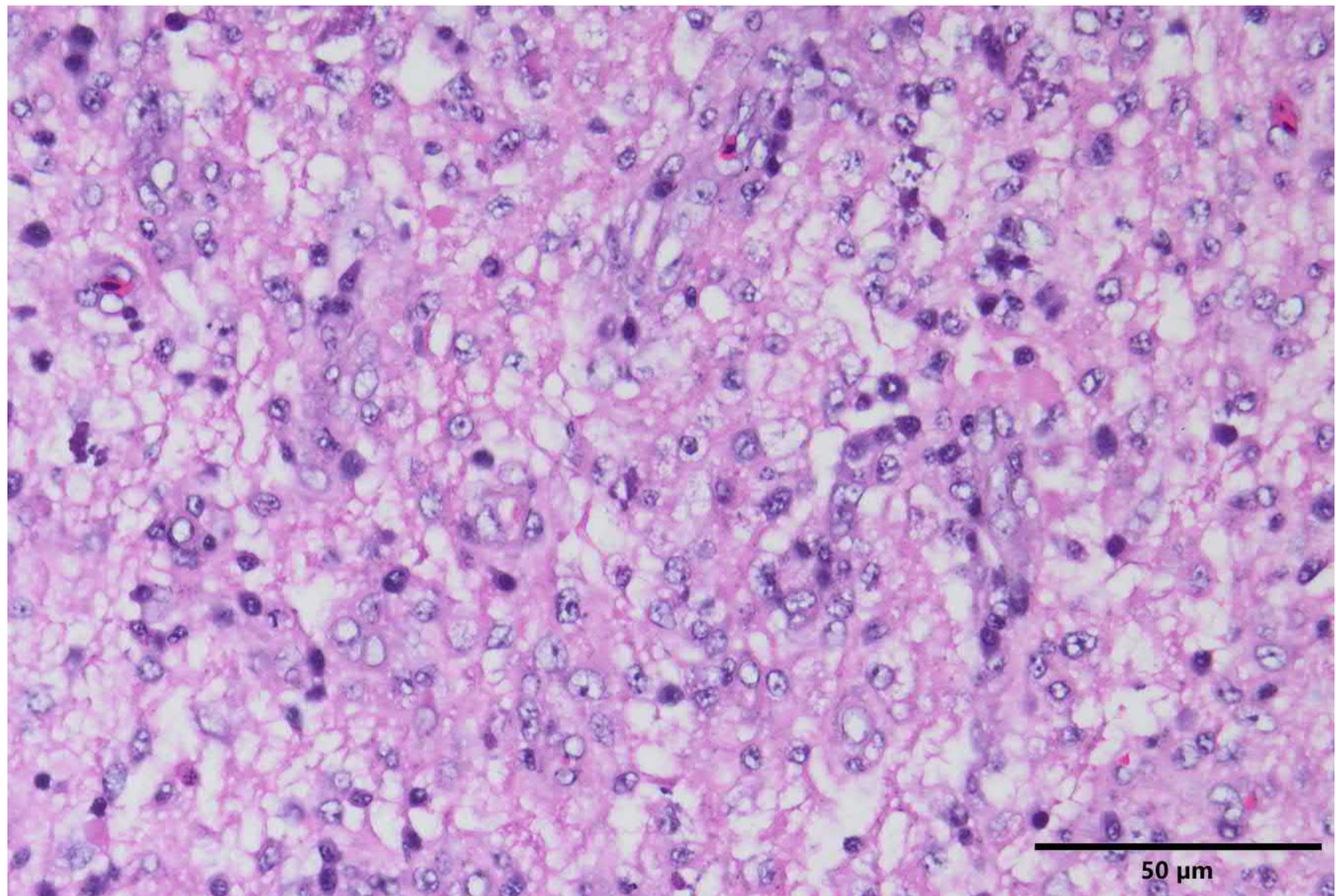
胰臟：嚴重瀰漫實質壞死

肉鴨

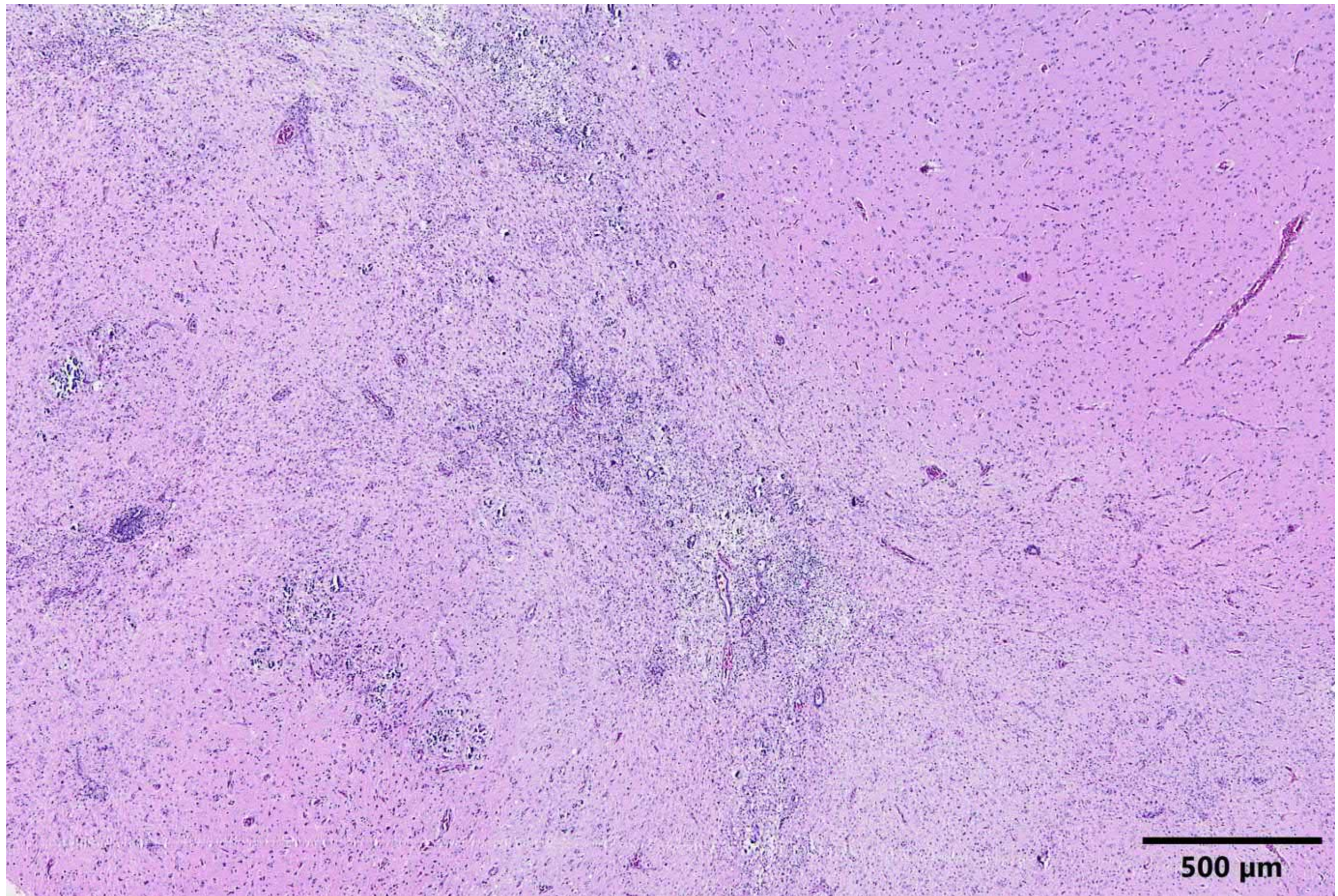
- 臨床症狀與外觀：偶見精神沉鬱
- 常見肉眼病變：胰臟潮紅出血、肺臟濕重、心外膜或心內膜斑駁、腦血管怒、腎腫大



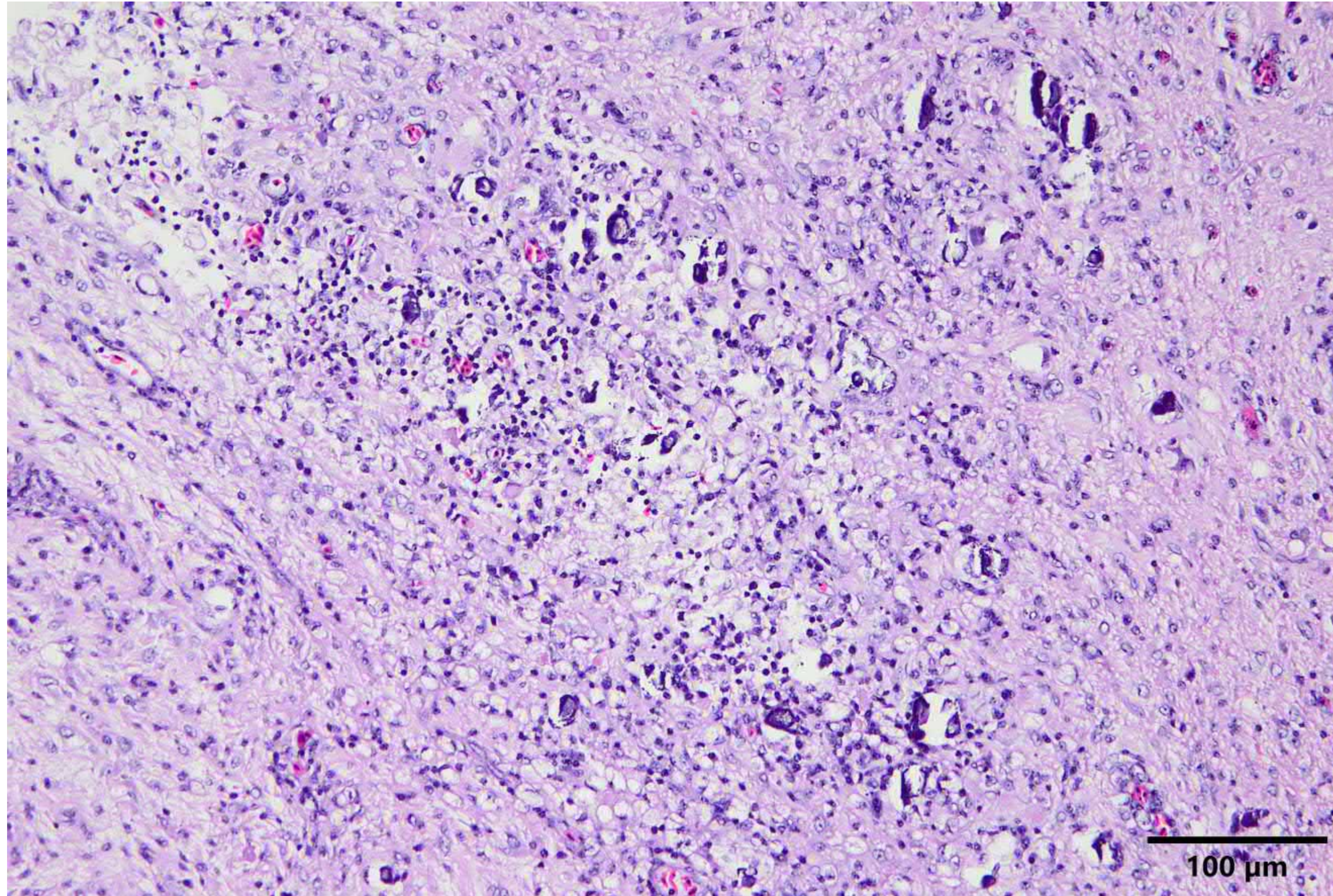
大腦：局部廣泛實質壞死，伴隨gliosis



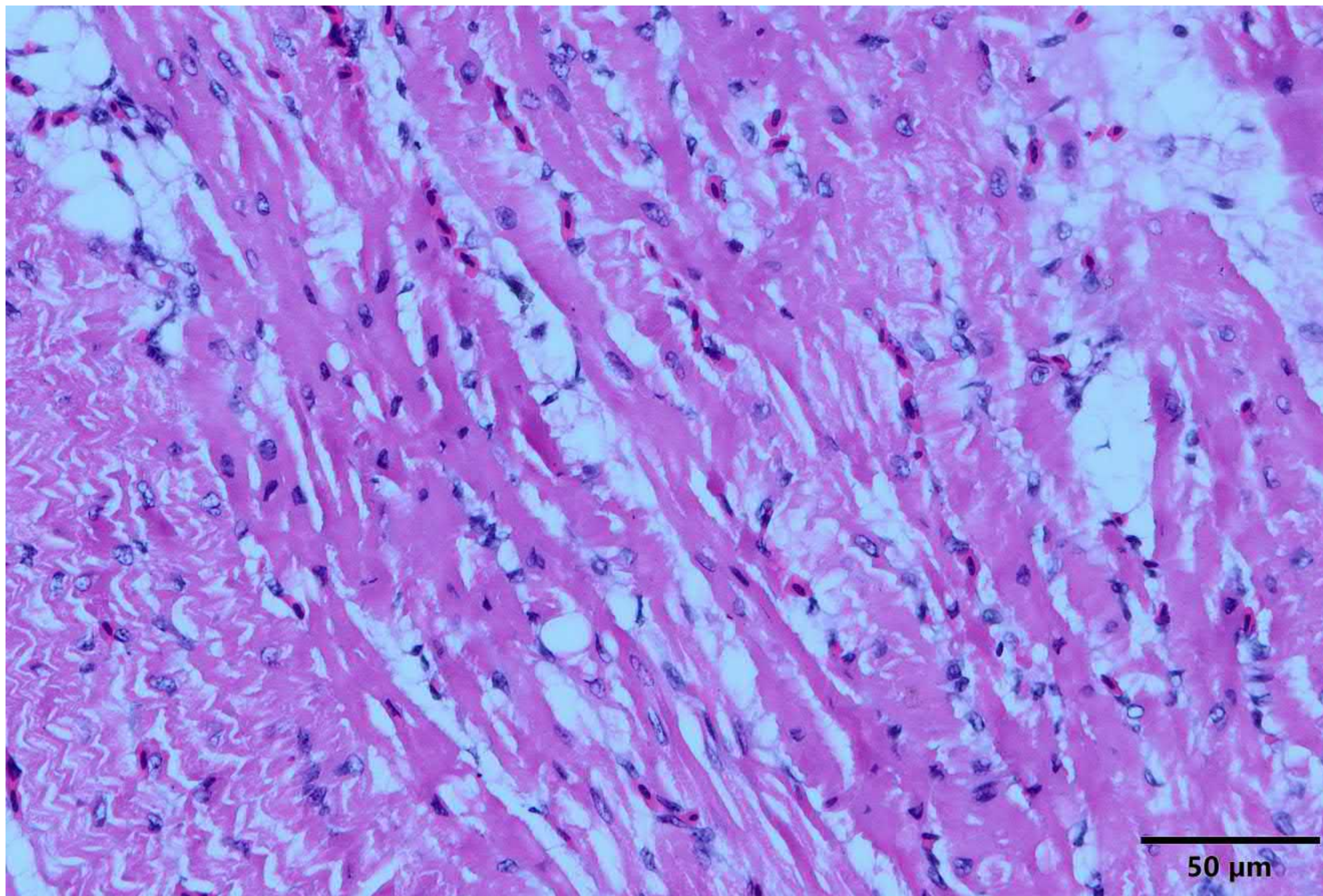
大腦：局部廣泛實質壞死，伴隨嚴重gliosis



大腦：局部廣泛實質壞死，伴隨gliosis



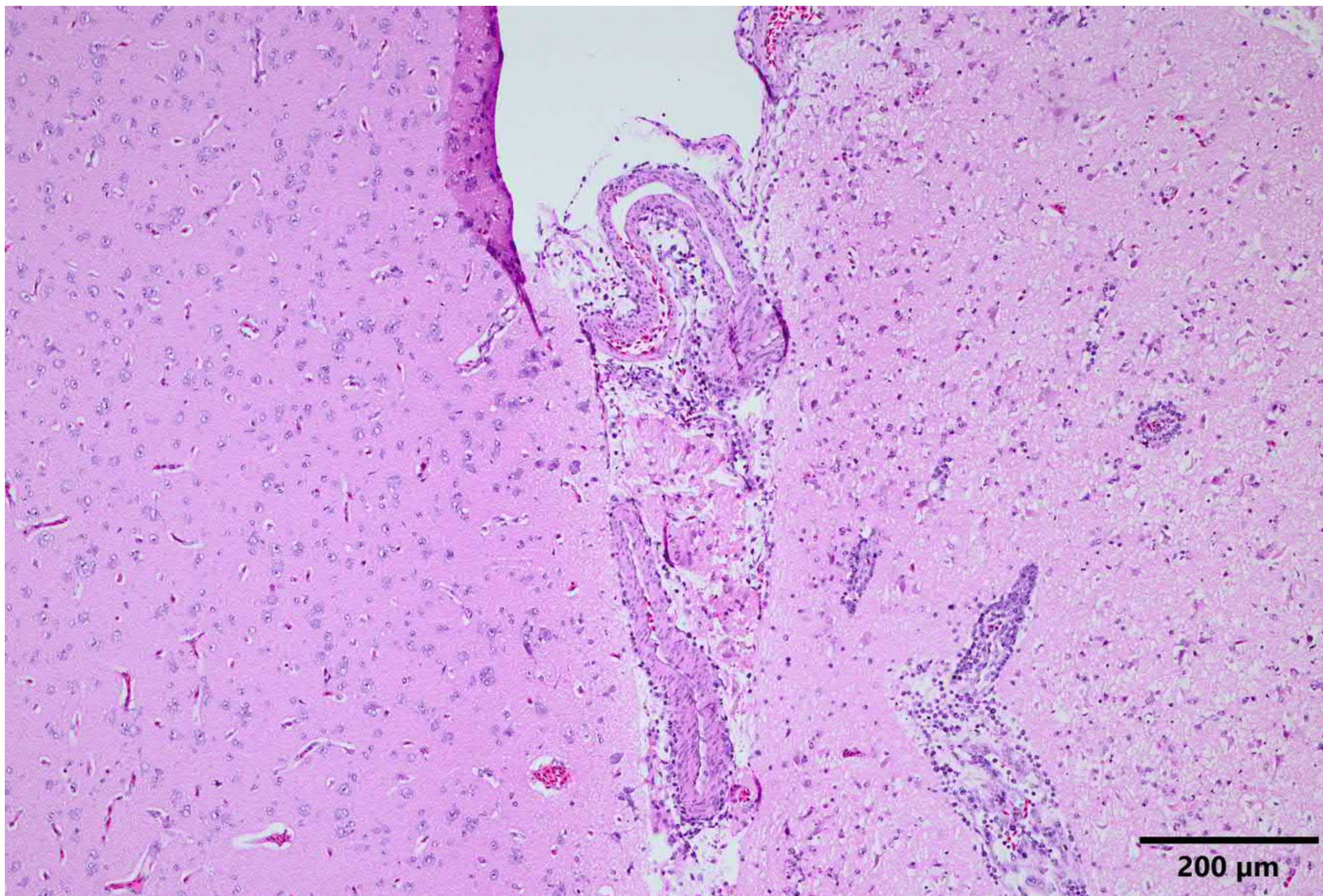
大腦：局部廣泛實質壞死，伴隨礦物質化(mineralization)



心肌：局部輕微心肌變性

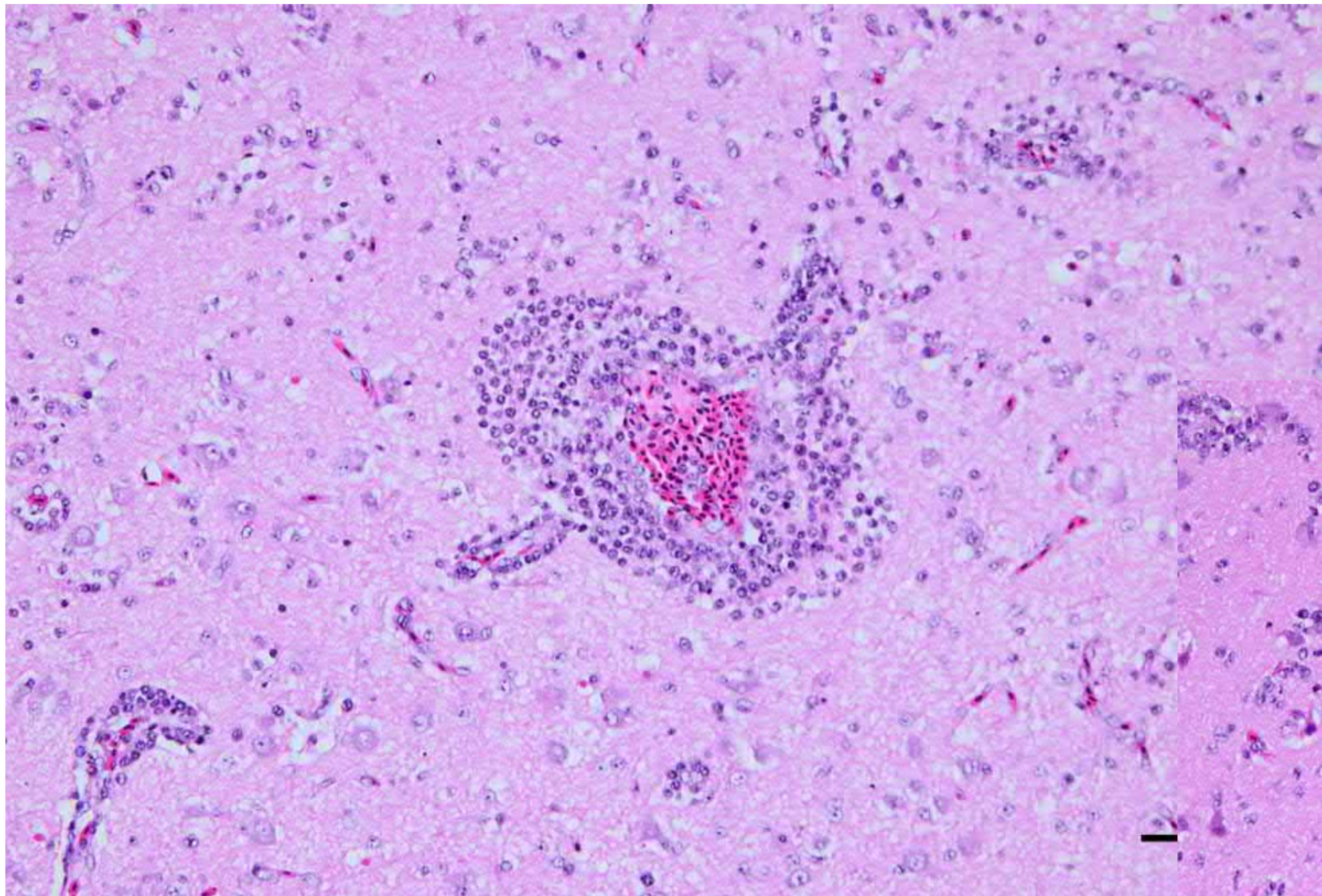
鵝

- 臨床症狀與外觀：偶見精神沉鬱
- 常見肉眼病變：胰臟壞死、心臟塌陷、大腦血管怒張、腎腫大、肺臟濕重、氣囊混濁

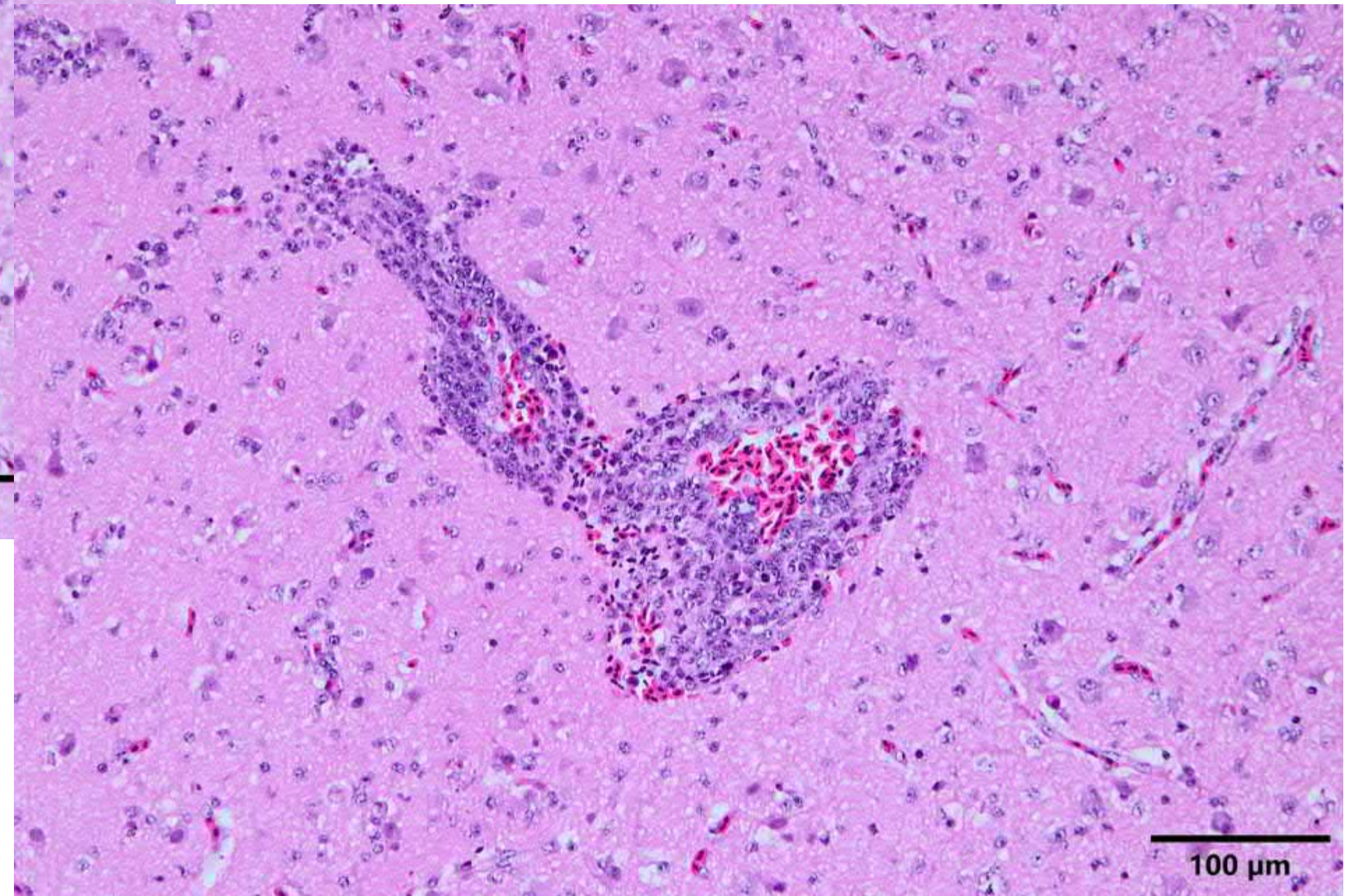


左側大腦：正常

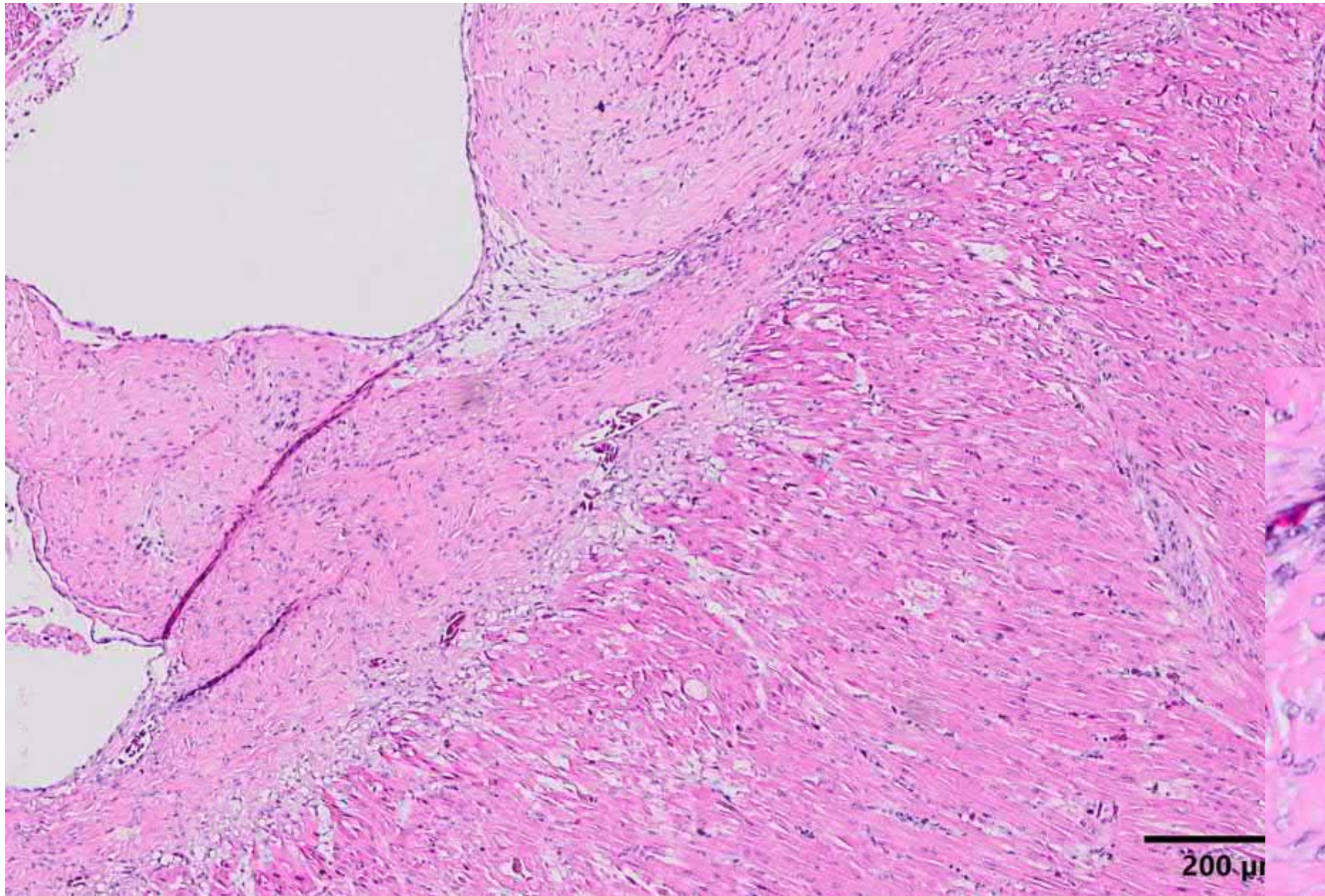
右側大腦：淋巴球性腦膜腦炎。



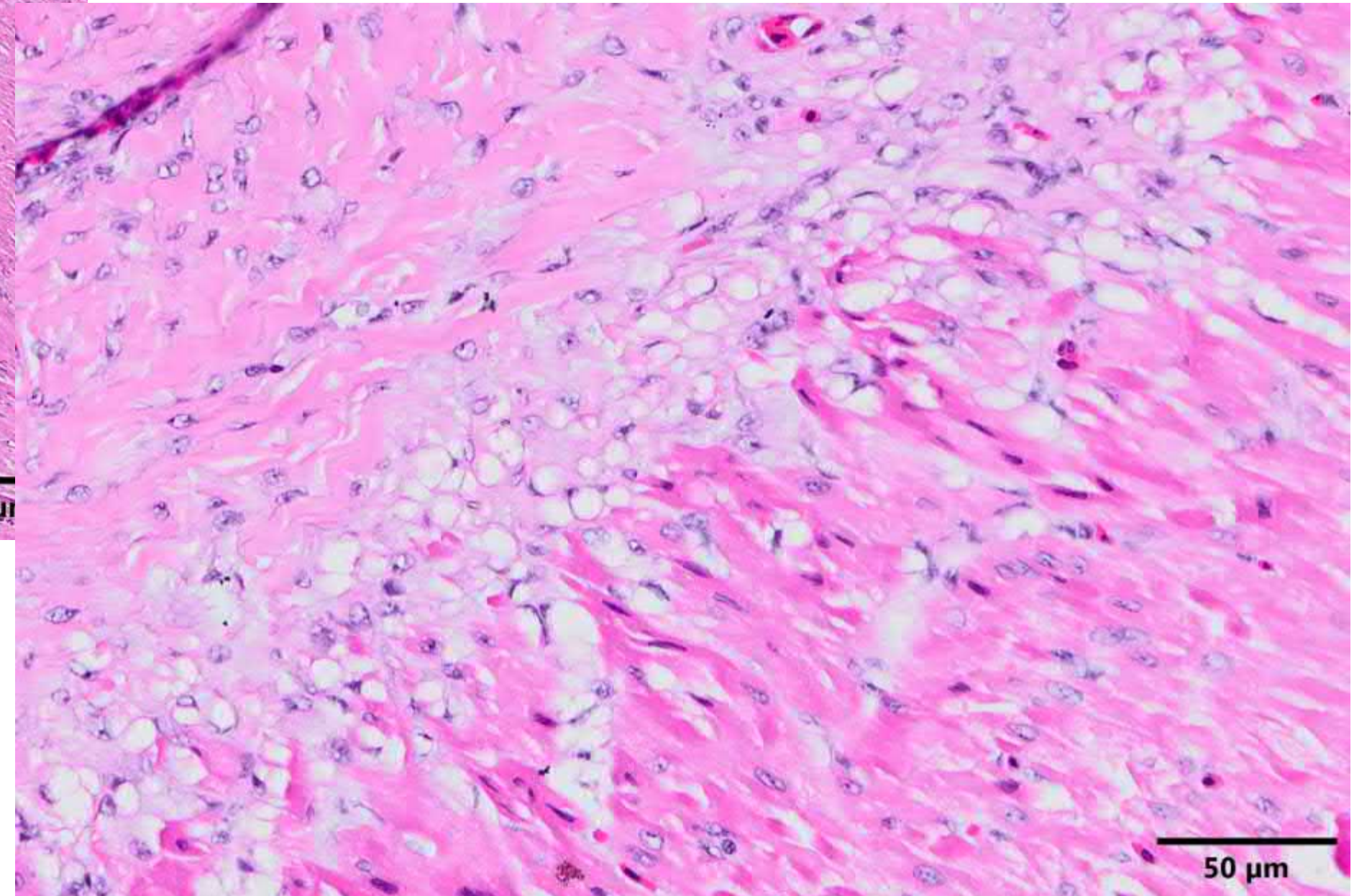
大腦：淋巴球性腦炎



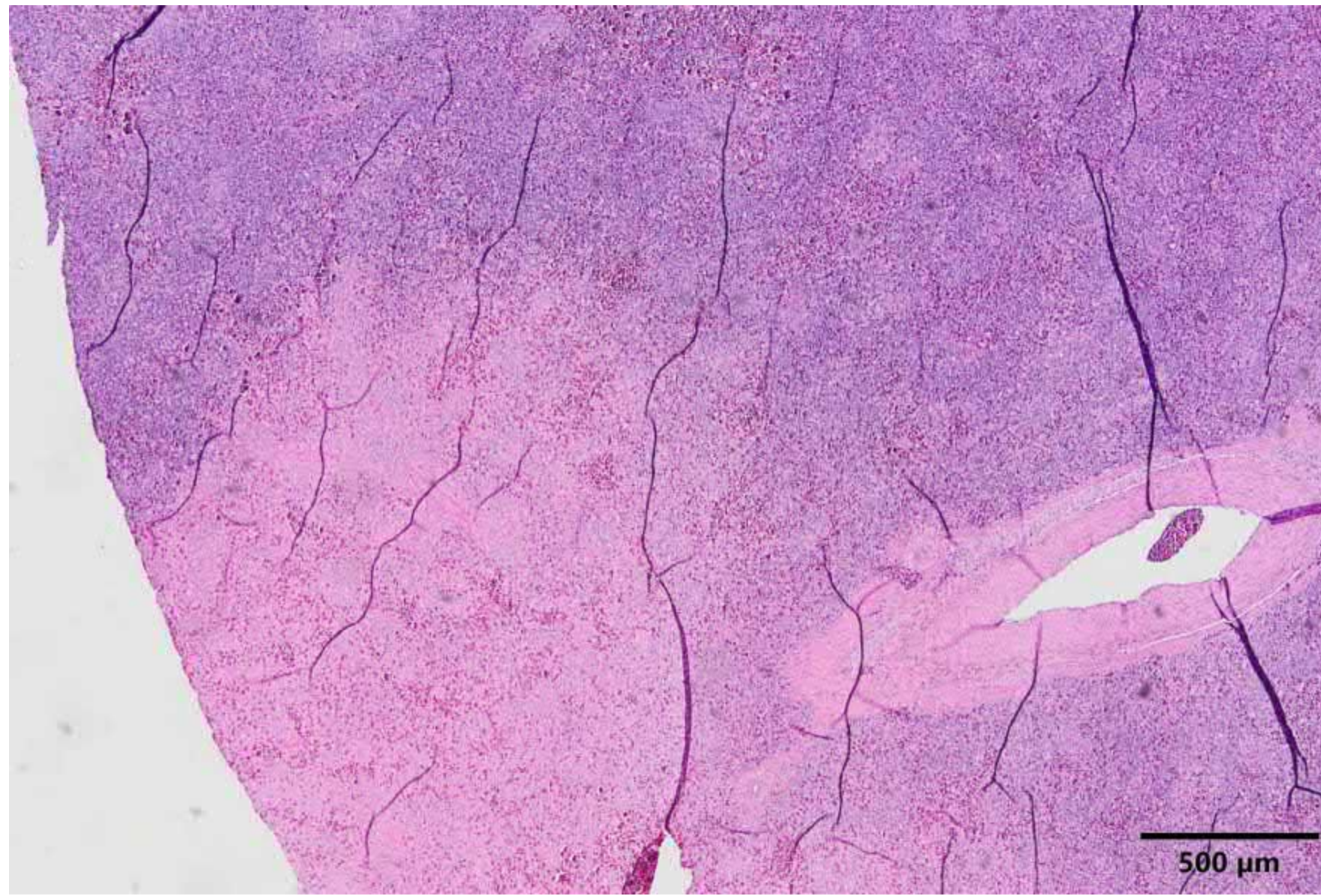
大腦：淋巴球性腦炎



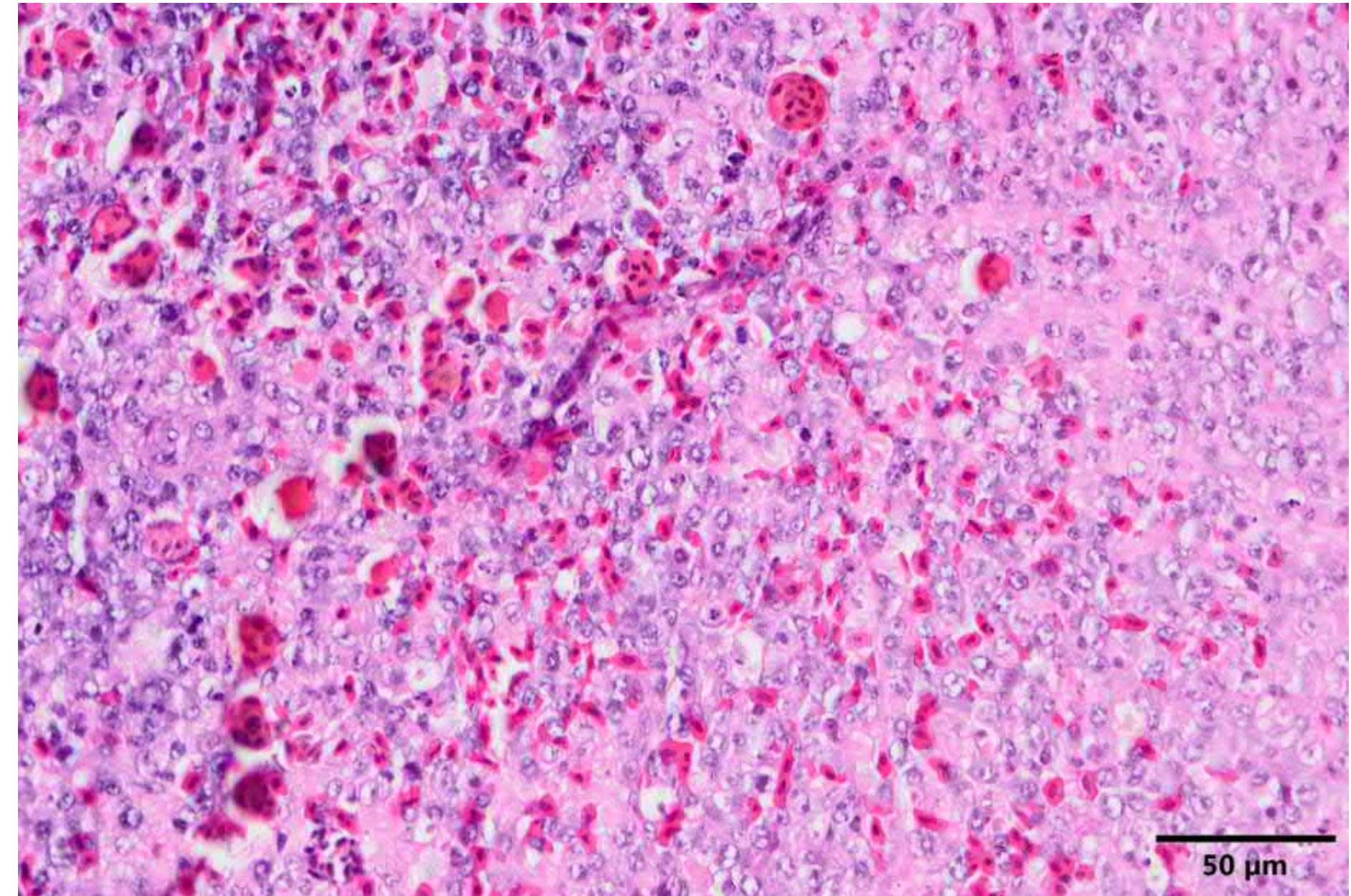
心肌：局部輕微心肌變性



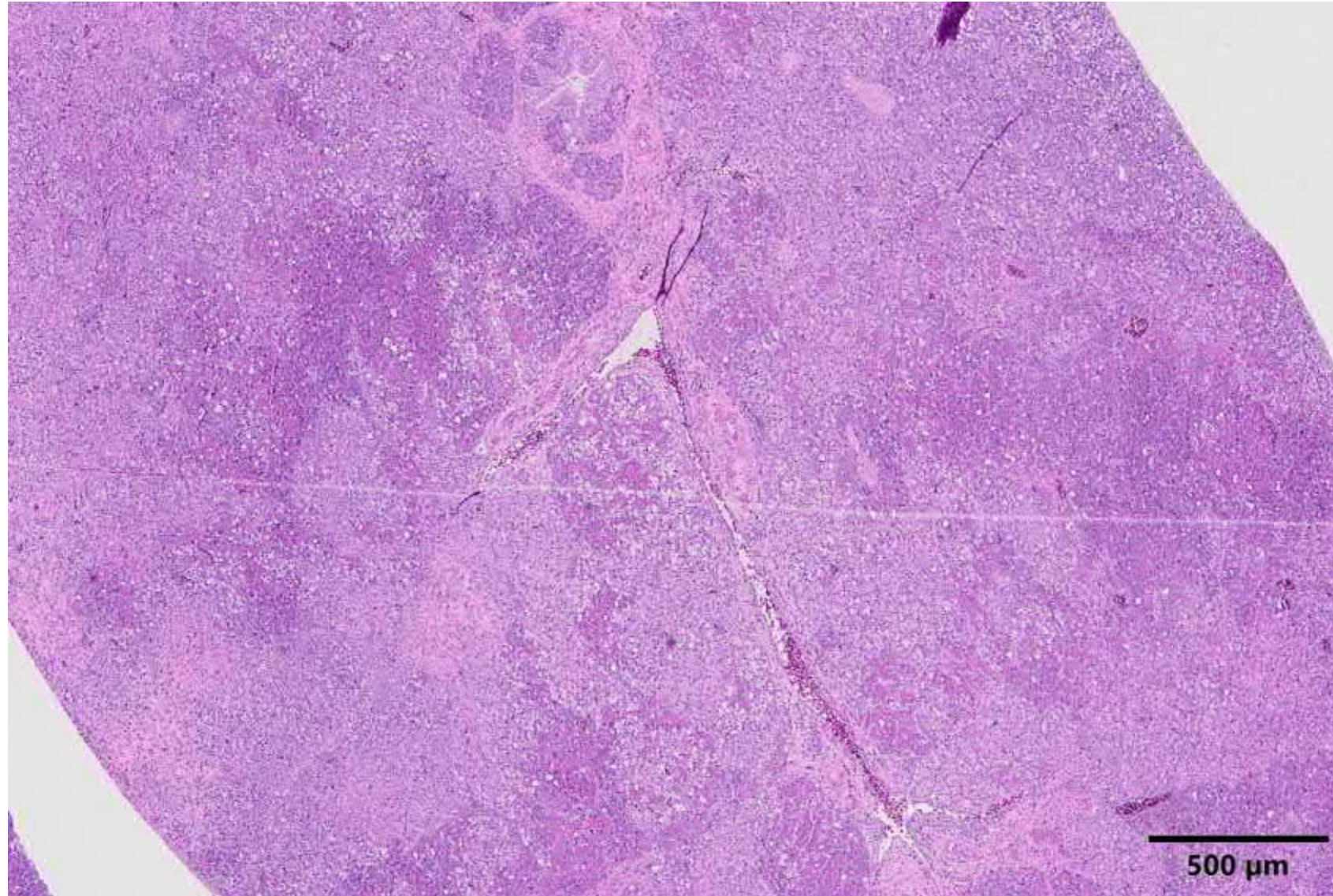
心肌：局部輕微心肌變性



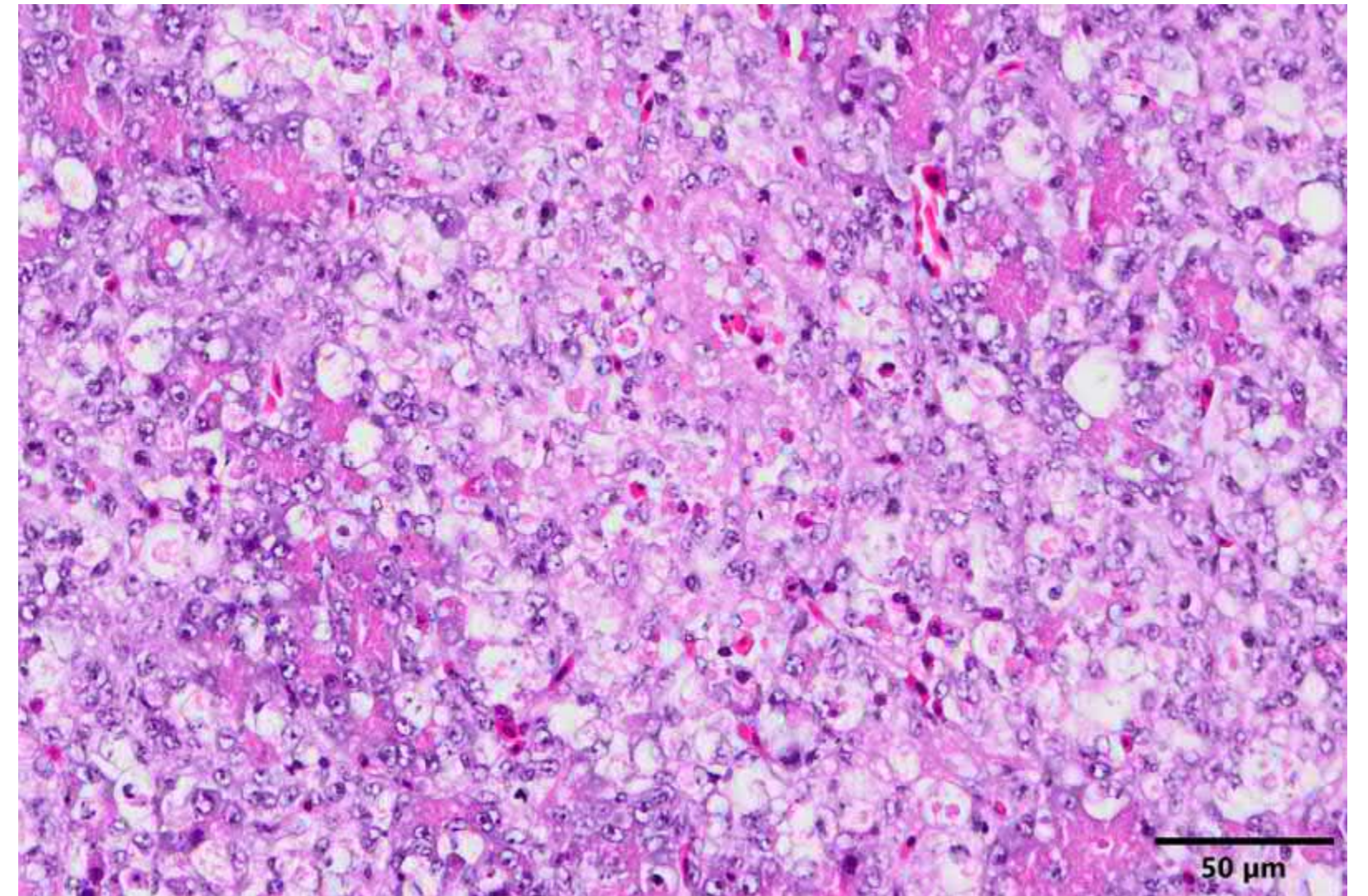
脾臟：局部廣泛實質壞死



脾臟：局部廣泛實質壞死



胰臟：多發局部至融合性實質壞死

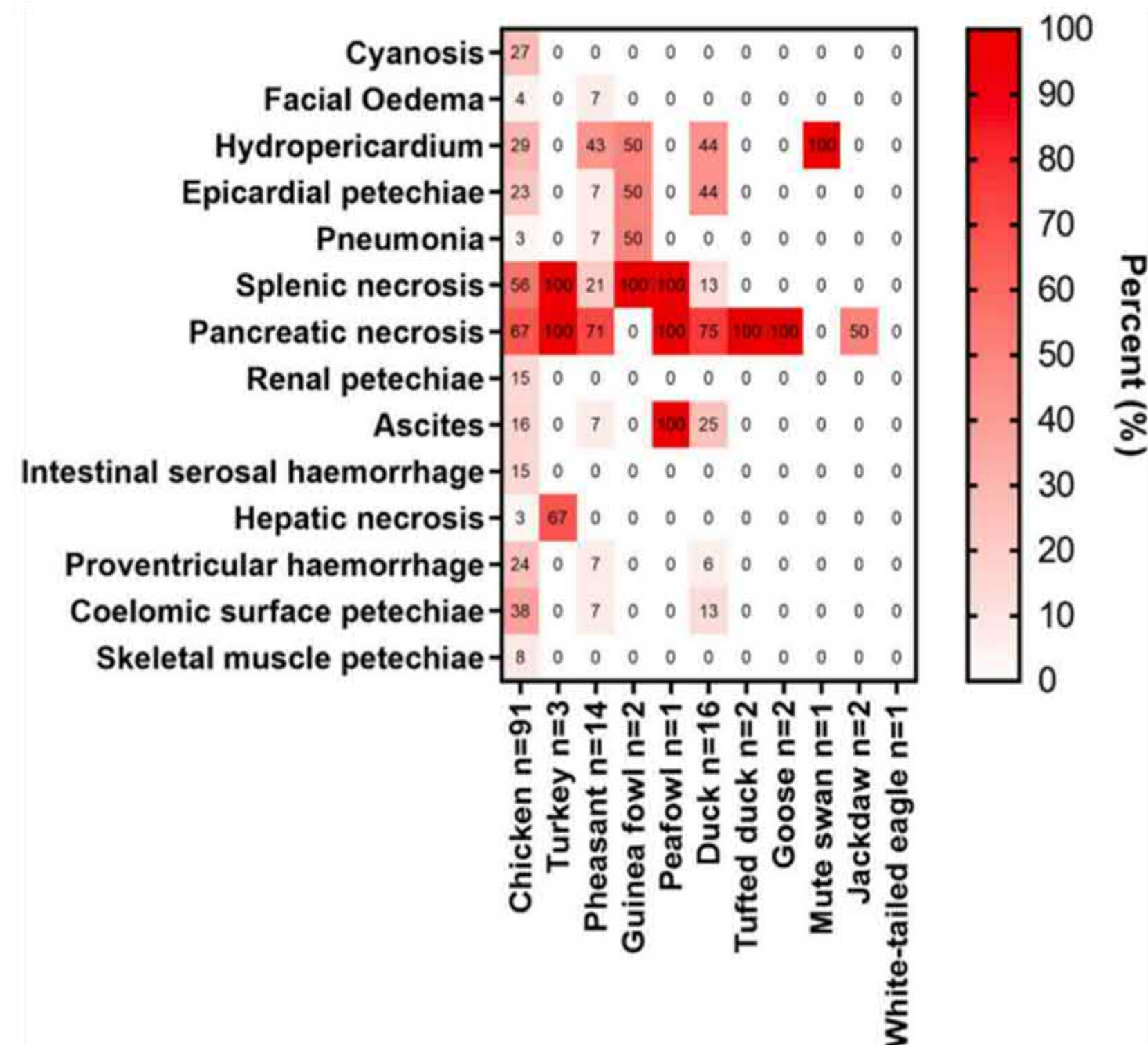


胰臟：實質壞死

Gross pathology of high pathogenicity avian influenza virus H5N1 2021–2022 epizootic in naturally infected birds in the United Kingdom

Fabian Z.X. Lean^a  , Ana Gómez Vitores^a, Scott M. Reid^b, Ashley C. Banyard^{b,c}, Ian H. Brown^{b,c}, Alejandro Núñez^a, Rowena D.E. Hansen^b

H5N1 clade 2.3.4.4b



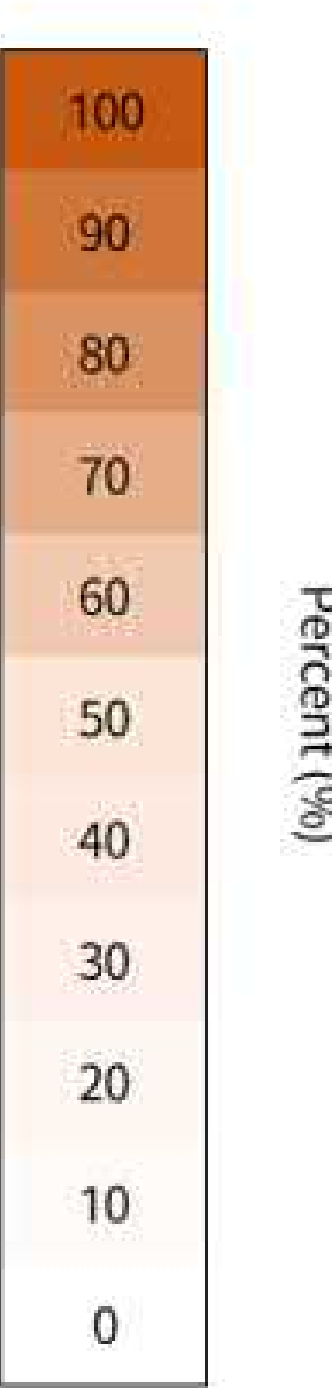
肉眼病變統計*

	Chicken	Duck	Goose
Brain congestion	22	74	50
Hydropericardium	35	16	24
Heart collapse	21	32	16
Epicardial petechiae	11	21	3
Endocardium petechiae	6	5	3
Rubbery lung	35	89	39
Liver enlargement	14	5	13
Hepatic congestion	9	16	8
Gastric erosion or ulcer	9	21	0
Pale kidney	7	21	3
Kidney enlargement	57	16	34
Pancreas reddening	9	0	21
Pancreas petechiae	13	11	13
Splenic enlargement	19	32	0
Pale foci on spleen	21	5	24

Chicken (n=94)

Duck (n=19)

Goose (n=38)



*以隻數為單位

- 常見肉眼病變多為非特異性，但典型病變（肌腺胃糜爛潰瘍、胰臟出血壞死）亦有機會觀察到
 - 雞：腎腫大、肺濕重、心包囊積液
 - 鴨：肺濕重、腦血管怒張、心臟塌陷、脾腫大
 - 鵝：腦血管怒張、肺濕重、腎腫大

A Semiquantitative Scoring System for Histopathological and Immunohistochemical Assessment of Lesions and Tissue Tropism in Avian Influenza

Maria Landmann¹, David Scheibner², Annika Graaf³, Marcel Gischke², Susanne Koethe³, Olanrewaju I Fatola⁴, Barbara Raddatz¹, Thomas C Mettenleiter², Martin Beer³, Christian Grund³, Timm Harder³, Elsayed M Abdelwhab², Reiner Ulrich¹

- Scoring, 0- normal, 1-mild, 2-moderate, 3-severe
- Parenchymal necrosis, necroinflammatory lesions
- Brain, heart, lung, liver, kidney, pancreas, spleen

組織病變統計*

	Chicken	Duck	Goose
Brain, 0	0	1	0
Brain, 1	13	1	2
Brain, 2	0	1	2
Brain, 3	0	0	1
Heart, 0	0	2	1
Heart, 1	12	1	4
Heart, 2	0	0	0
Heart, 3	0	0	0
Liver, 0	1	1	0
Liver, 1	5	2	4
Liver, 2	1	0	0
Liver, 3	0	0	1
Spleen, 0	1	3	0
Spleen, 1	5	0	3
Spleen, 2	3	0	2
Spleen, 3	3	0	0

	Chicken	Duck	Goose
Lung, 0	1	1	2
Lung, 1	8	1	2
Lung, 2	2	1	1
Lung, 3	0	0	0
Kidney, 0	4	0	0
Kidney, 1	8	2	4
Kidney, 2	0	0	0
Kidney, 3	0	0	0
Pancreas, 0	1	0	0
Pancreas, 1	4	3	2
Pancreas, 2	0	0	1
Pancreas, 3	6	0	2

*以場次為單位

- 常見組織病變
 - 雞：輕微腦炎、輕微心肌變性、輕微肺炎、輕微腎小管壞死、輕微至嚴重脾臟壞死、輕微至嚴重胰臟壞死
 - 鴨：無或輕微至中等腦炎、無脾臟或胰臟病變
 - 鵝：輕微至中等程度腦炎、輕微心肌變性、輕微肝臟壞死、輕微肺炎、輕微至中等脾臟壞死、輕微至嚴重胰臟壞死

Discussion

- 現場案例無法排除其他疾病及相關病變（尤其是呼吸道疾病）。
- 後續將進行病毒之免疫組織化學染色，以評估病毒對細胞之親和性。
- 腎臟、心臟常見肉眼病變，但未有明顯組織病變。
 - 後續將進行細胞變性相關的免疫組織化學染色，以分子生物層面評估細胞之受損程度
- 最終目標為將肉眼病變、組織病變、病毒IHC染色、細胞凋亡IHC染色等結果進行關聯性評估。

Thank you