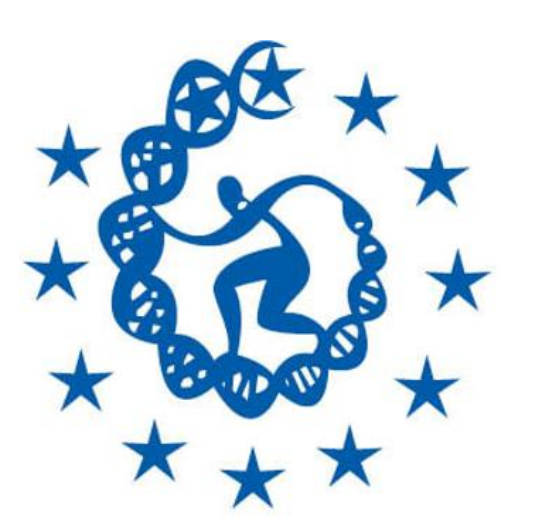


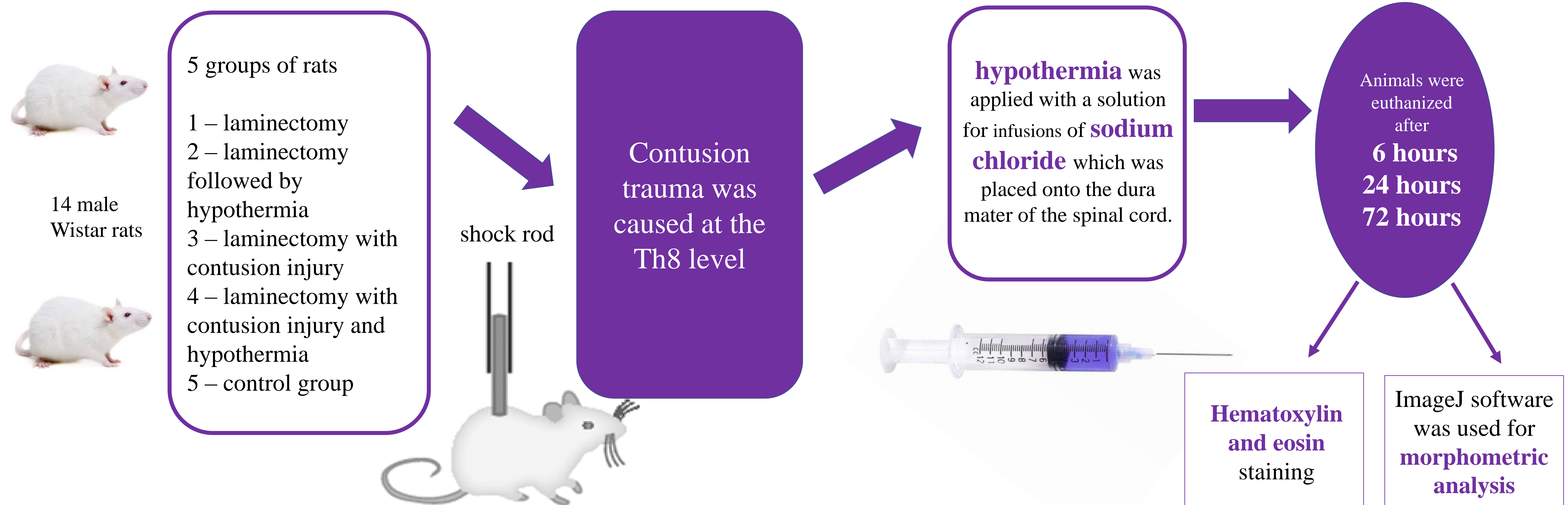
# Morphological evaluation of local hypothermia effects after spinal cord injury

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Traumatic spinal cord injury occupies a leading position among all spinal cord injuries (SCI). Pathological processes of SCI are not limited to the place of trauma and accompanied by a number of complications distal to the place of damage from many organ systems, which leads to the disability of patients and a significant reduction in their quality of life. One of the methods to reduce the area of secondary alteration and prevent complications after injury is applying of local hypothermia, which effects we studied in our work.

## MATERIALS AND METHODS



## RESULTS

**L2**

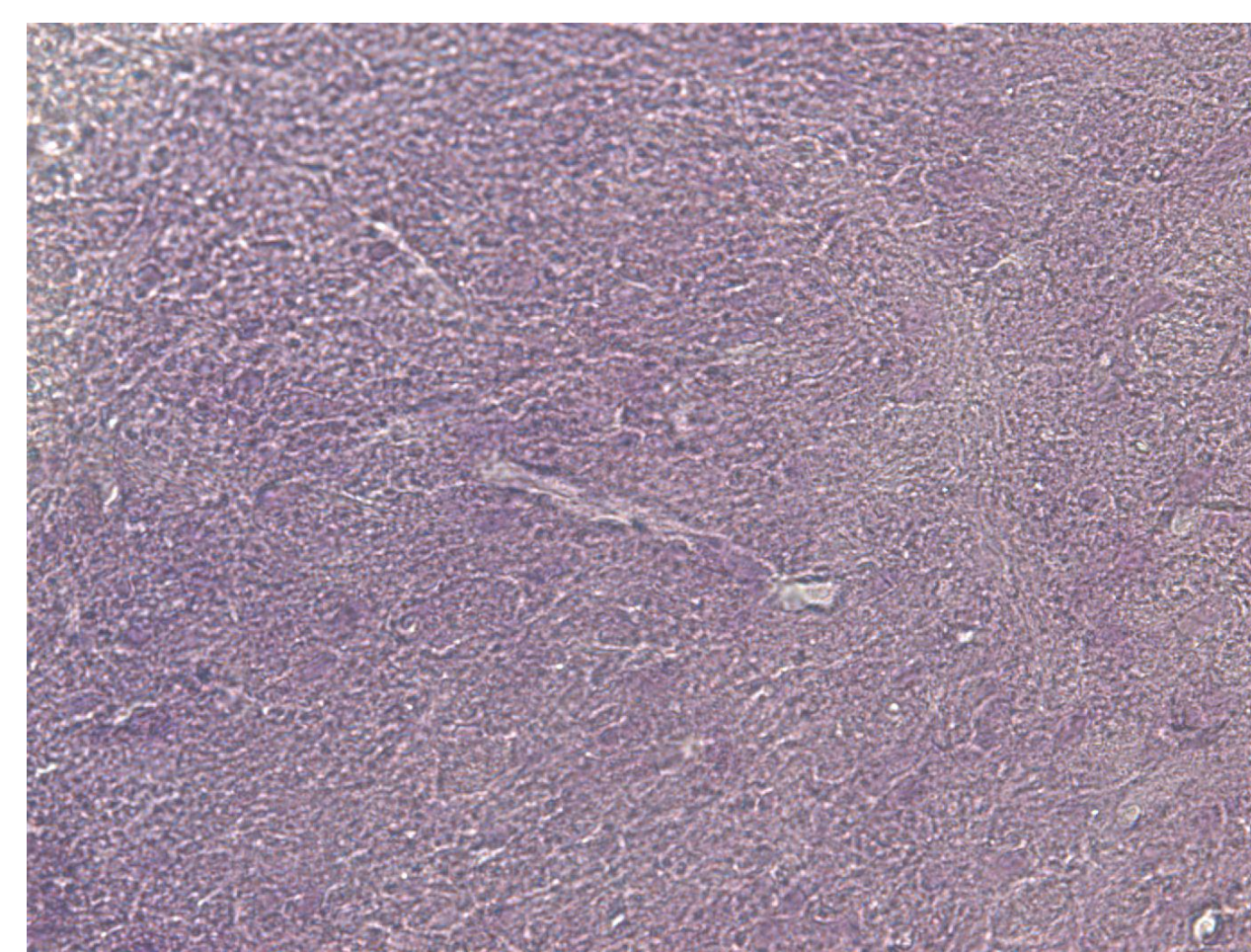
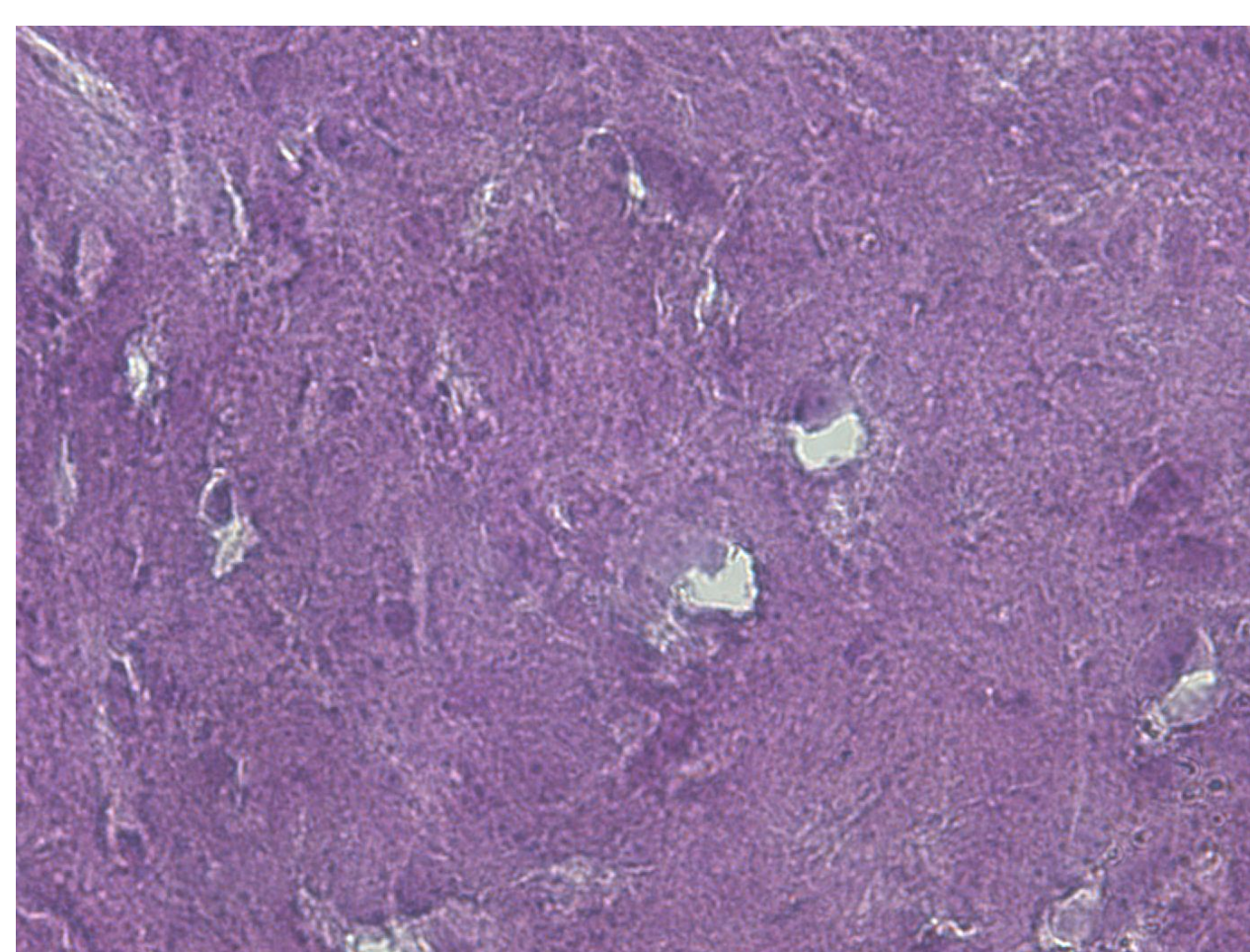
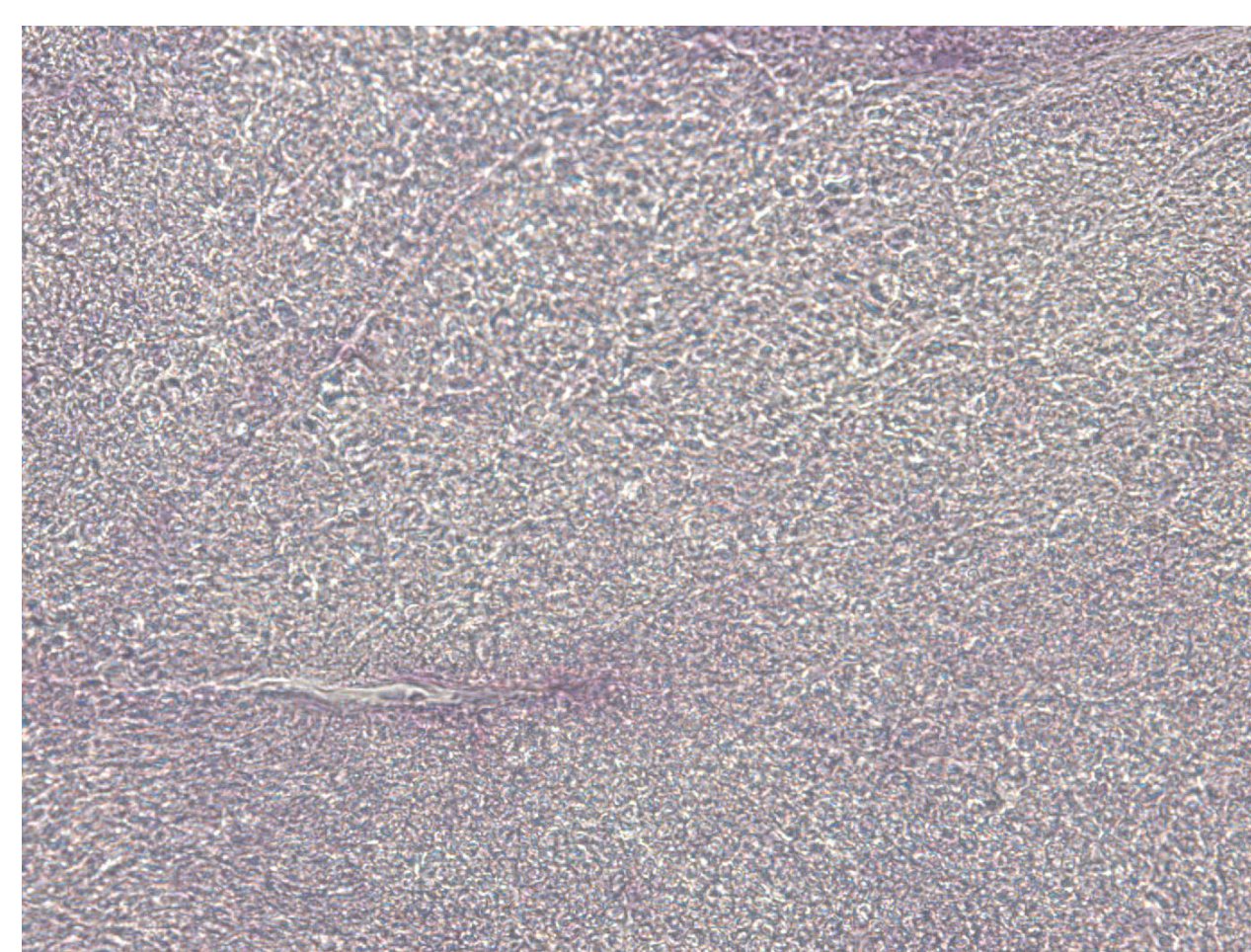
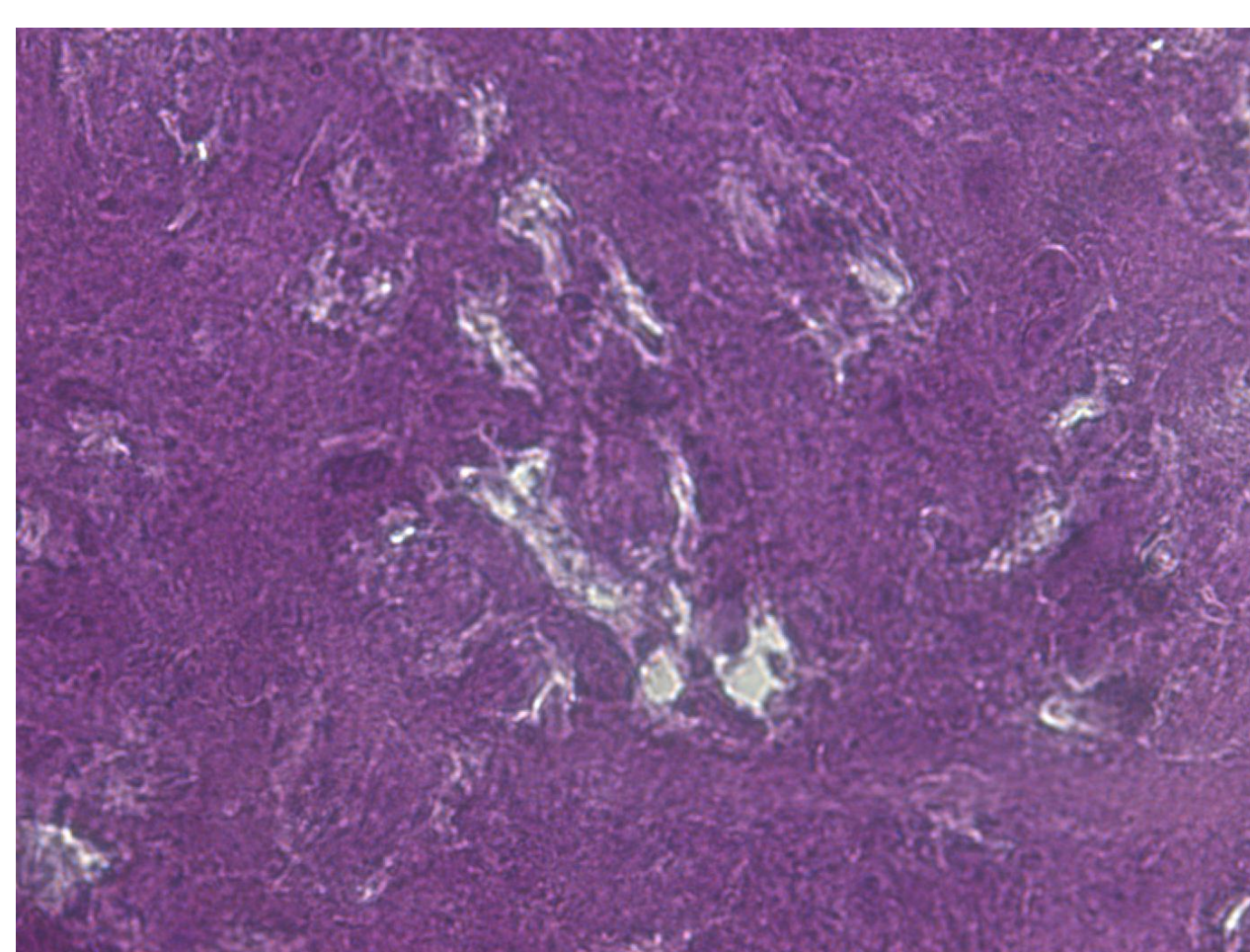
Laminectomy with contusion injury

Laminectomy with injury and hypothermia

White matter

After 6 hours

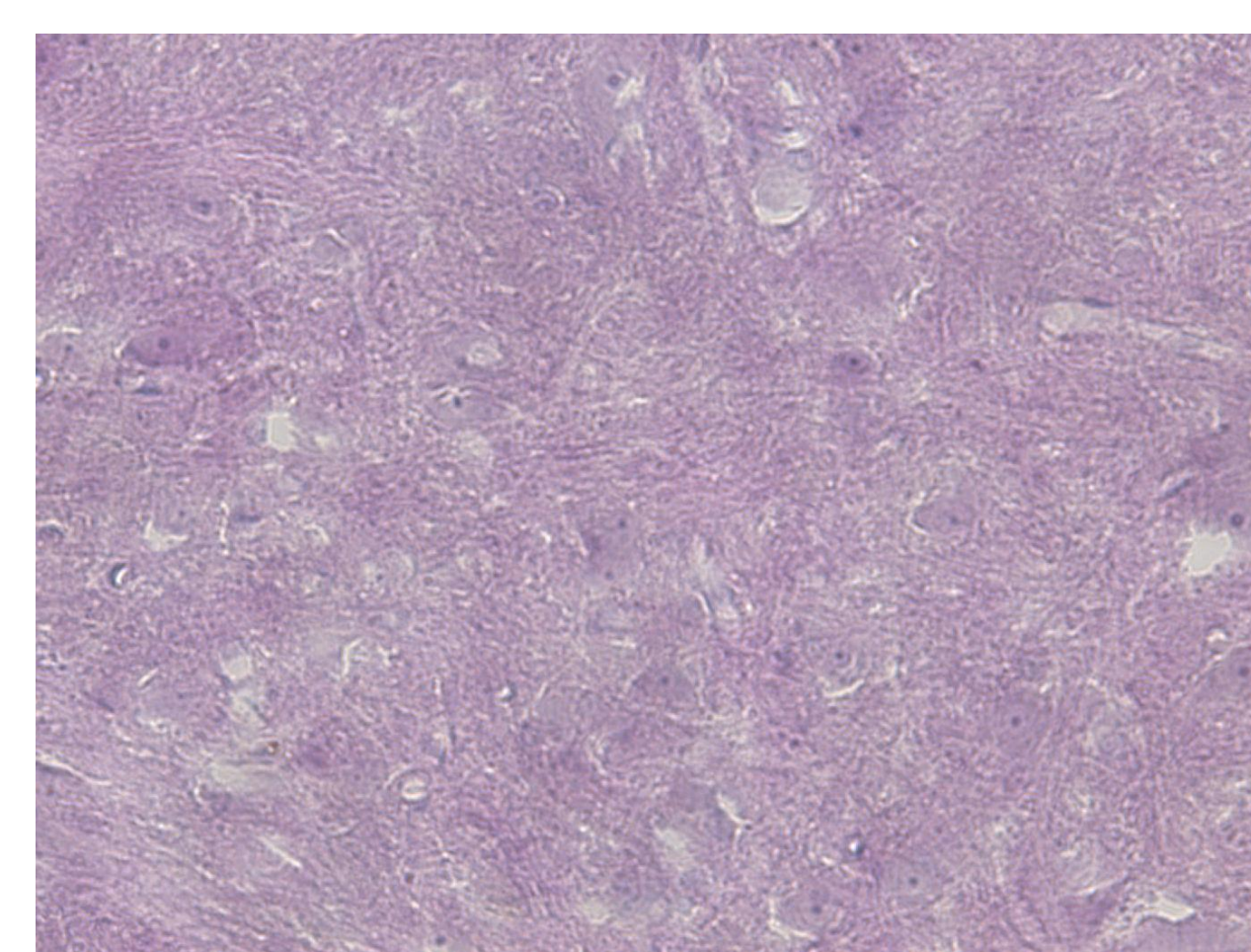
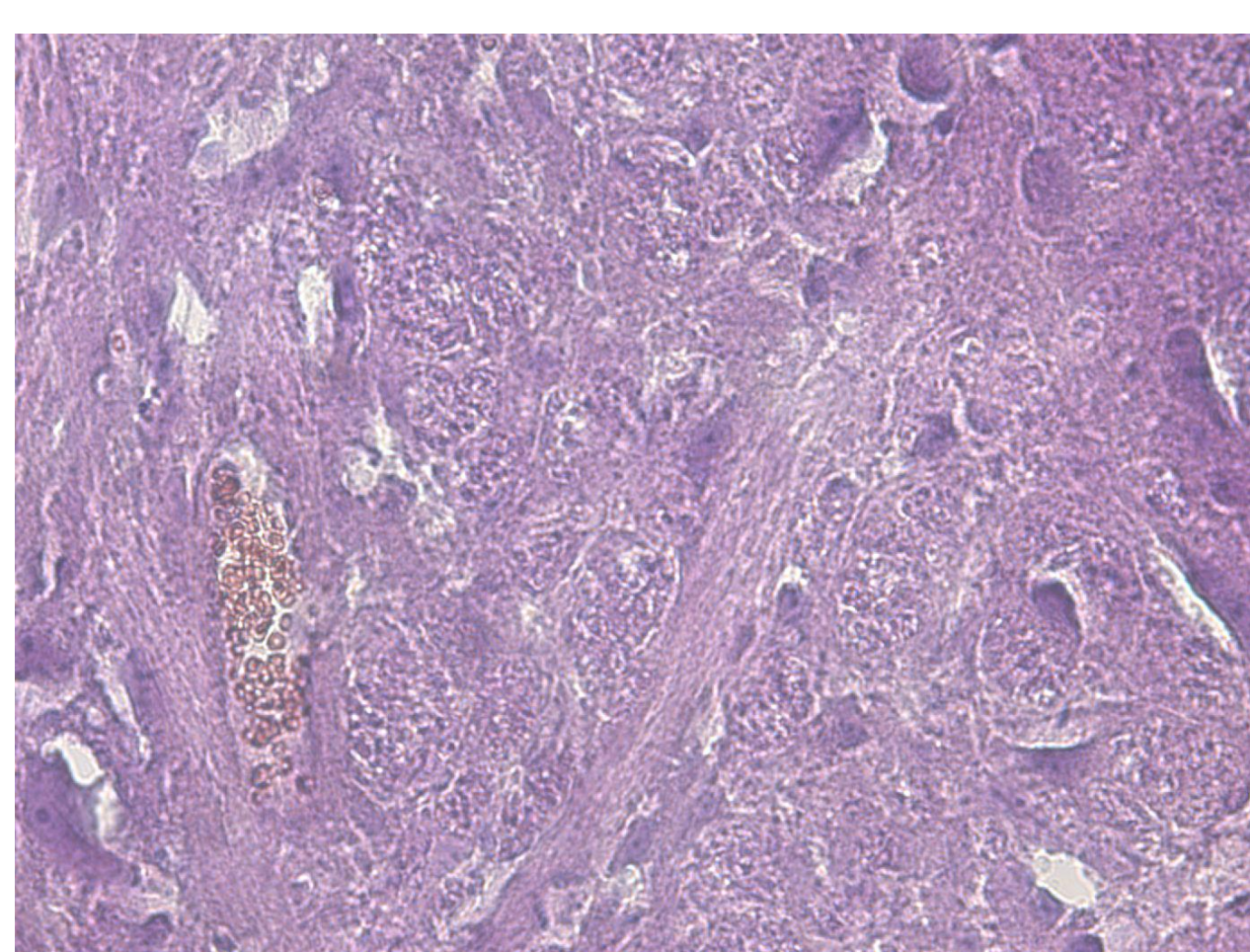
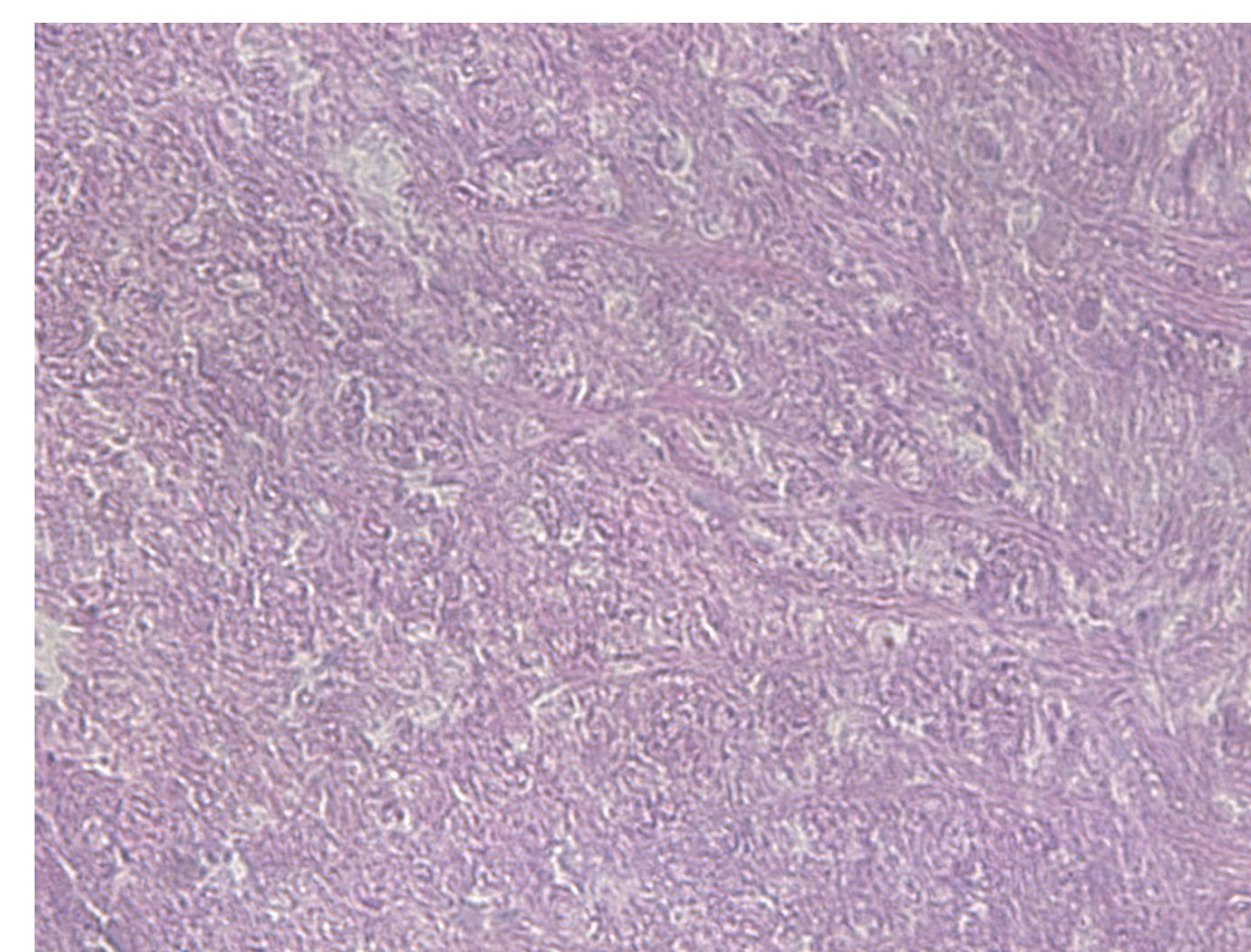
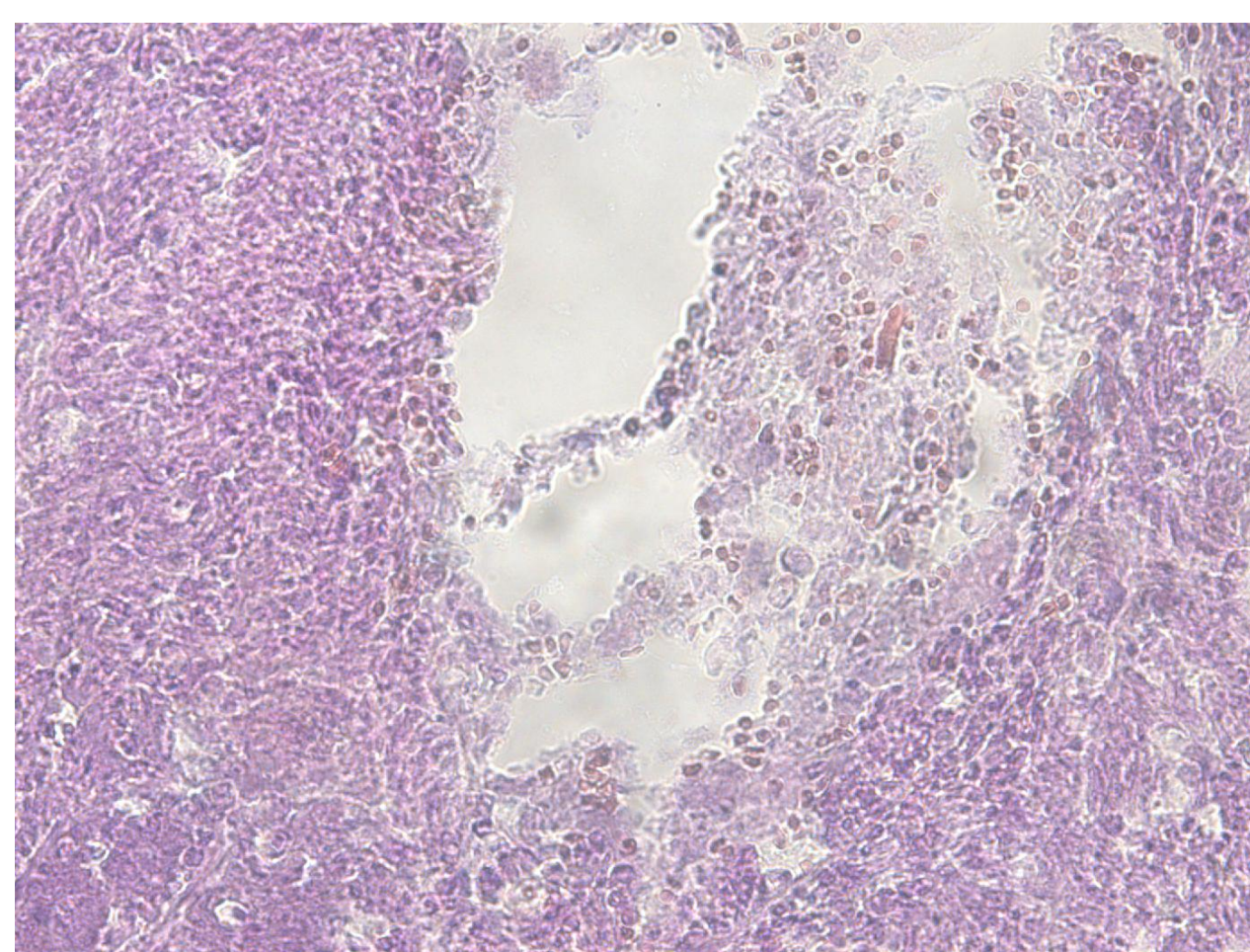
Posterior horn



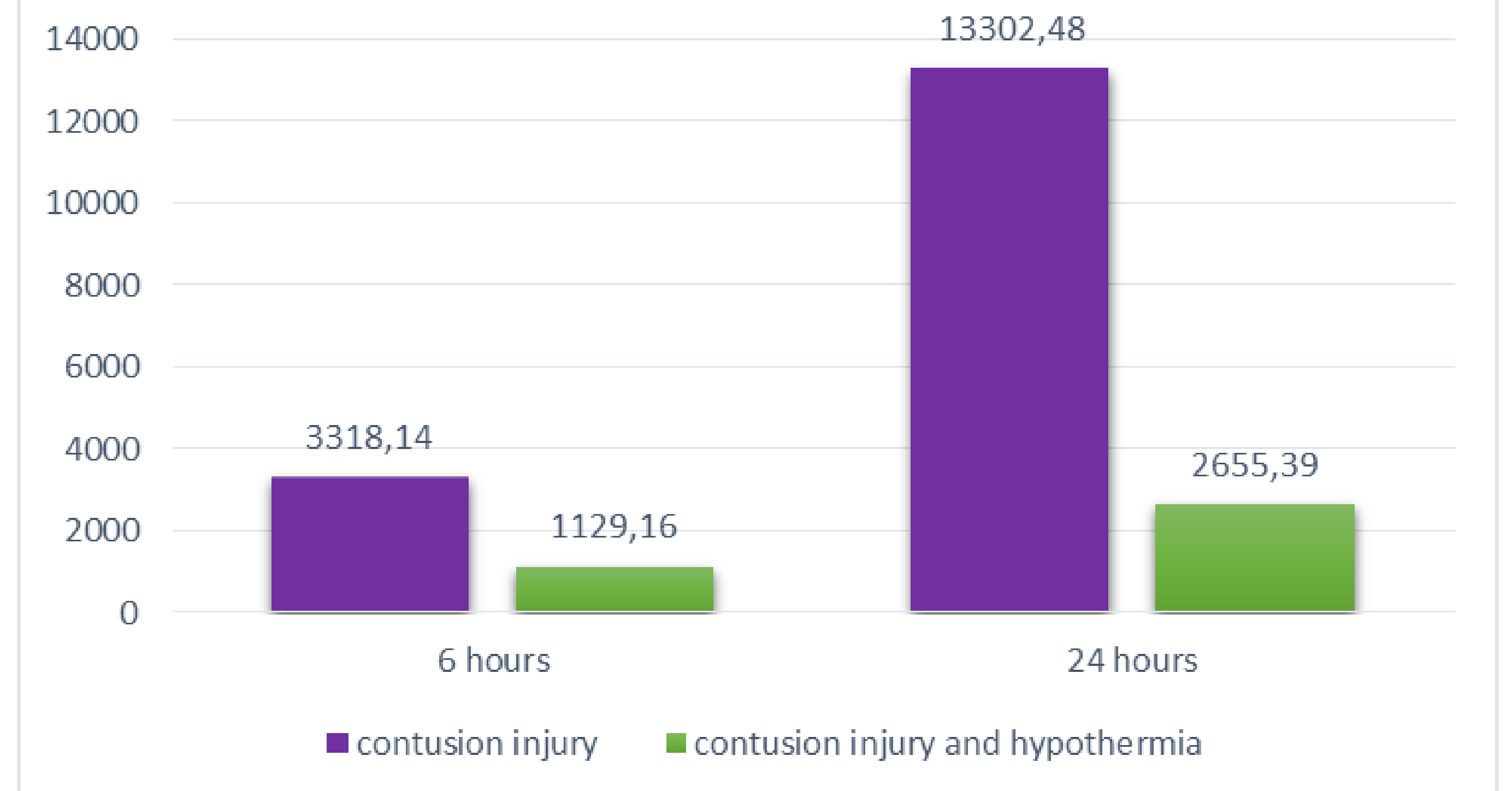
White matter

After 24 hours

Posterior horn

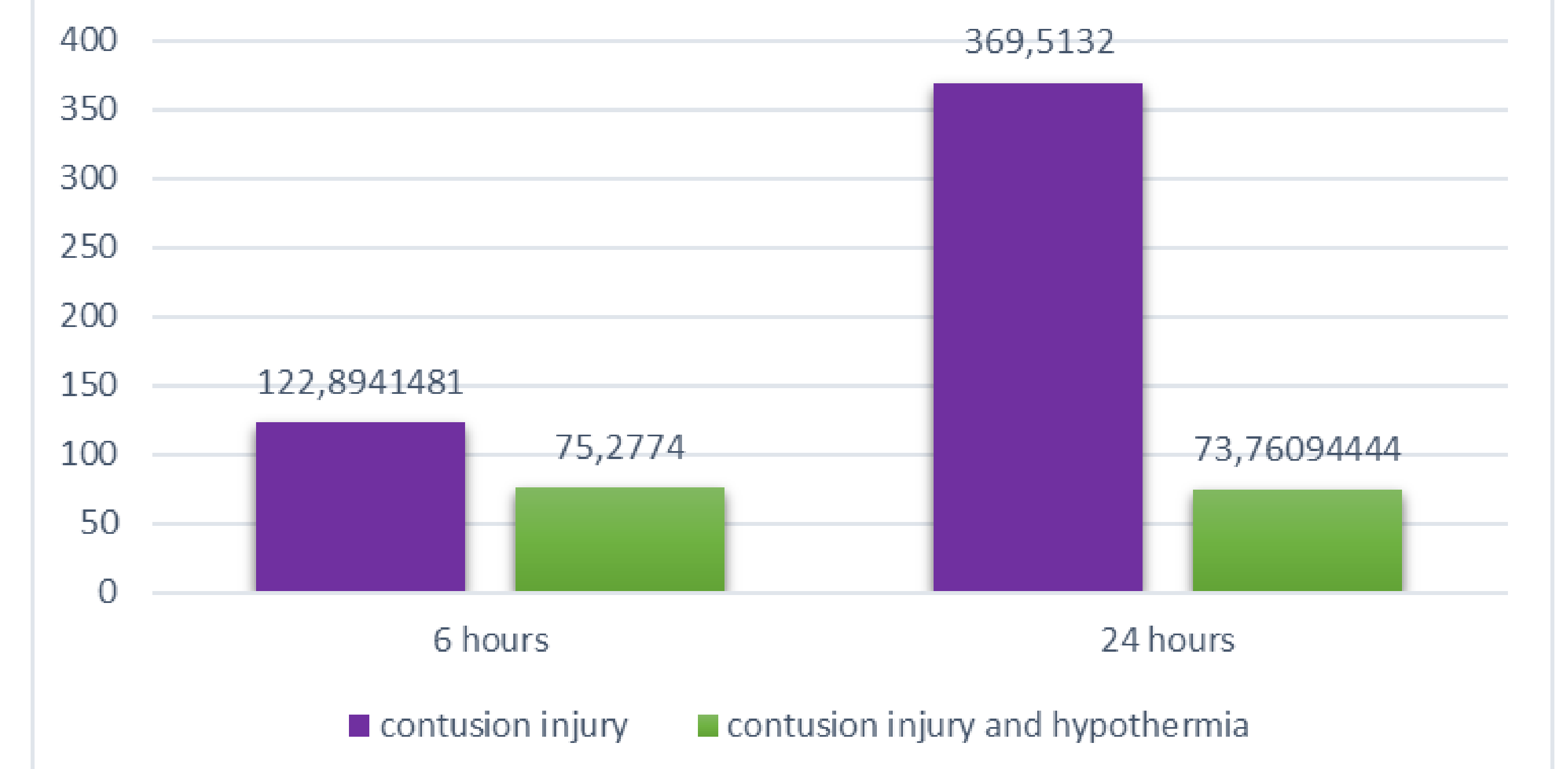


CAVITIES` TOTAL AREA, mkm<sup>2</sup>



The cavity area was decreased in 2.9 times after 6 hours, and in 5 times after 24 hours in rats with applied hypothermia

AVERAGE CAVITY AREA



## CONCLUSIONS

Obtained data approve a favorable effect of low temperatures on the posttraumatic period and can serve as supplementary treatment to the gene and cell therapy. The study was carried out with the financial support of the Russian Foundation for Basic Research in the framework of the research project No. 17-04-01746.