# KIT FOR CEREBRAL BIOPSY FRAMELESS AND ENDOSCOPY: EXPERIENCE WITH THE USE OF THE HOLDER TENETOR AND BIOPTIC CANNULA OF A NEW 3 MM CONCEPTION TO FACILITATE THE CEREBRAL BIOPSY AND THE IMMEDIATE DIAGNOSIS

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Problem of brain biopsy: having to put together the different devices often not congruent with each other with lengthening of surgical times and procedural difficulties as well as increased costs; often for these reasons the neurosurgeon decides to transform a biopsy into an open intervention

Possible solution: standardize the different components solving the problems of adaptability and logic

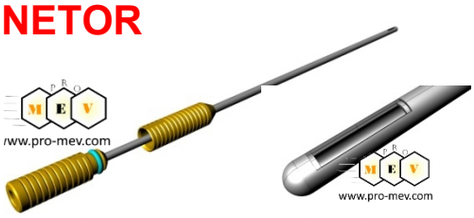
Speaking of brain biopsy procedures the gold standard for target localization was the frame-based stereotactic technique. Recently, frameless stereotactic techniques are increasingly used..

The advent of neuronavigation and the introduction of new devices on the market allowed to perform biopsies with a frameless technique.

**KIT=**

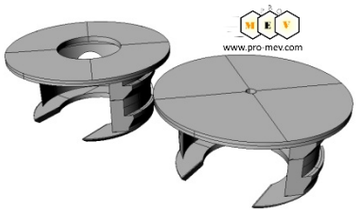

**TRIVELLUM**

**TENETOR**

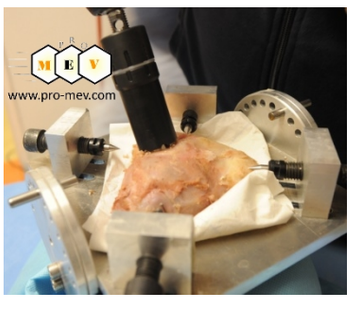

**BIG BRAIN BIOPSY**

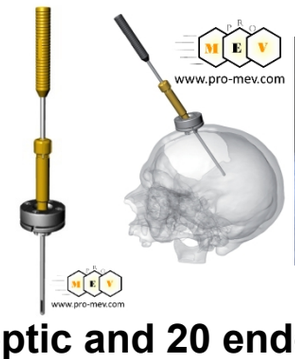
**BASKET-COVER**




Our procedure for performing frameless brain biopsies is as follows:

1 Burr hole diameter 14 mm with TRIVELLUM (dedicated cup-cutter)
2 Positioning of the TENETOR (expansion holder)
3 Use of biopsy cannula, type Sedan, with diameter 3 mm (BIG FORCEPS)
4 Four withdrawals at 90 ° each for each level of depth (8-12 withdrawals) under the guidance of the navigator
5 Extemporaneous reading of the biopsy findings directly in the operating room by the Anatomopathologist with immediate histological response
6 Closing the drill hole with BASKET-COVER




**Case study: 62 bioptic and 20 endoscopic procedures. We did not have any morbidity. For endoscopic procedures the usefulness of TENETOR is evident and fundamental because for its "robustness", and the availability of 5 rods with different diameters, can receive all the diameters of almost all endoscopes used in Neurosurgery (1, 4 mm up to 6.4 mm of external diameter). In addition, the TENETOR for the self-locking system of the instrument inserted into the cannula allows the Neurosurgeon the total freedom of hands. Associated with other KIT the TENETOR is a useful and safe device.**