BRAINLAB

Product

VarioGuide
Alignment
System

Navigated frameless biopsies

Experience high precision drilling and biopsy needle alignment. Achieve precision and increase efficiency and patient comfort during navigated frameless biopsies with the new Brainlab VarioGuide® Alignment System and the Disposable Pre-calibrated Biopsy Needle.[1,2] Designed to facilitate the navigated collection of tissue samples, these tools efficiently target pre-planned trajectories and provide step-by-step workflow guidance.
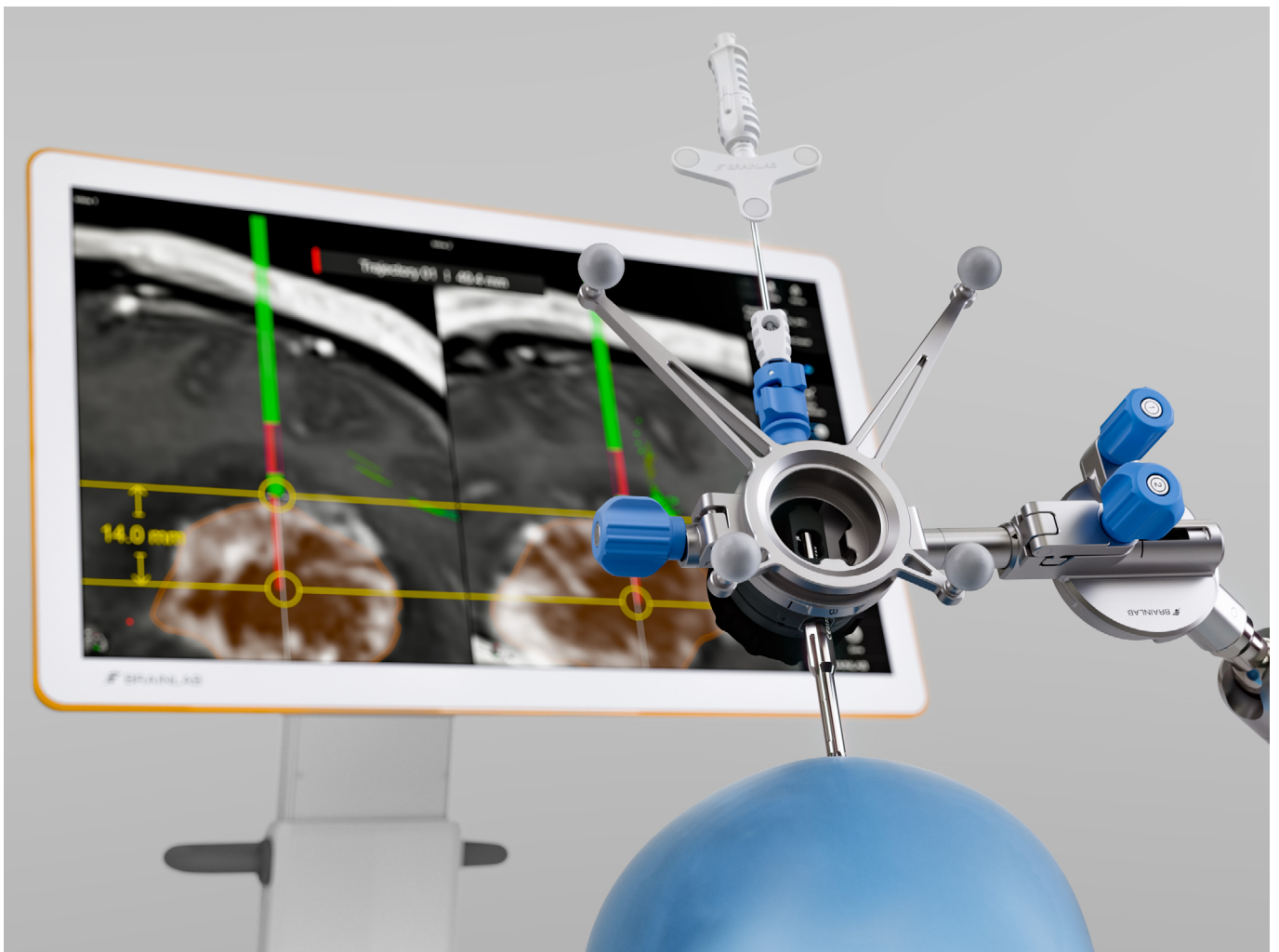
Bridging the gap between head frame and freehand procedures

VarioGuide is an instrument holder that aids surgeons in precisely aligning tools to pre-planned trajectories. It is simple to use and gives surgeons greater confidence while enabling efficient, accurate biopsies.[1,2] The deeply integrated drilling workflow with optional Cranial Biopsy Drill Kit facilitates precise and minimally invasive drilling. VarioGuide adapts to instruments from Ø 1.8 – 8 mm and when used with the simple-to-operate Disposable Pre-calibrated Biopsy Needle, tissue samples can be taken immediately.

Guided drilling

- Cranial Biopsy Drill Kit enables controlled drilling through the Alignment Guide Tube and simplifies navigated placement of the Disposable Pre-calibrated Biopsy Needle

- Limit drilling depth and support safety with the Drill Bit and Depth Stop

Decreased patient trauma

- Use the Cranial Biopsy Drill Kit to reduce the burr hole size and minimize trauma to the patient compared to freehand drilling

- Create a stable setup during biopsy with the Bone Anchor which, when inserted through the Alignment Guide Tube, provides firm fixation between the head holder, the patient, and VarioGuide

- After drilling, increase precision by inserting the Disposable Pre-calibrated Biopsy Needle in line with the planned trajectory

High usability

- VarioGuide Alignment Software Cranial provides step-by-step guidance when aligning the system

- The Disposable Pre-calibrated Biopsy Needle offers more working length, increased diameter, and a shorter cutting window[3]
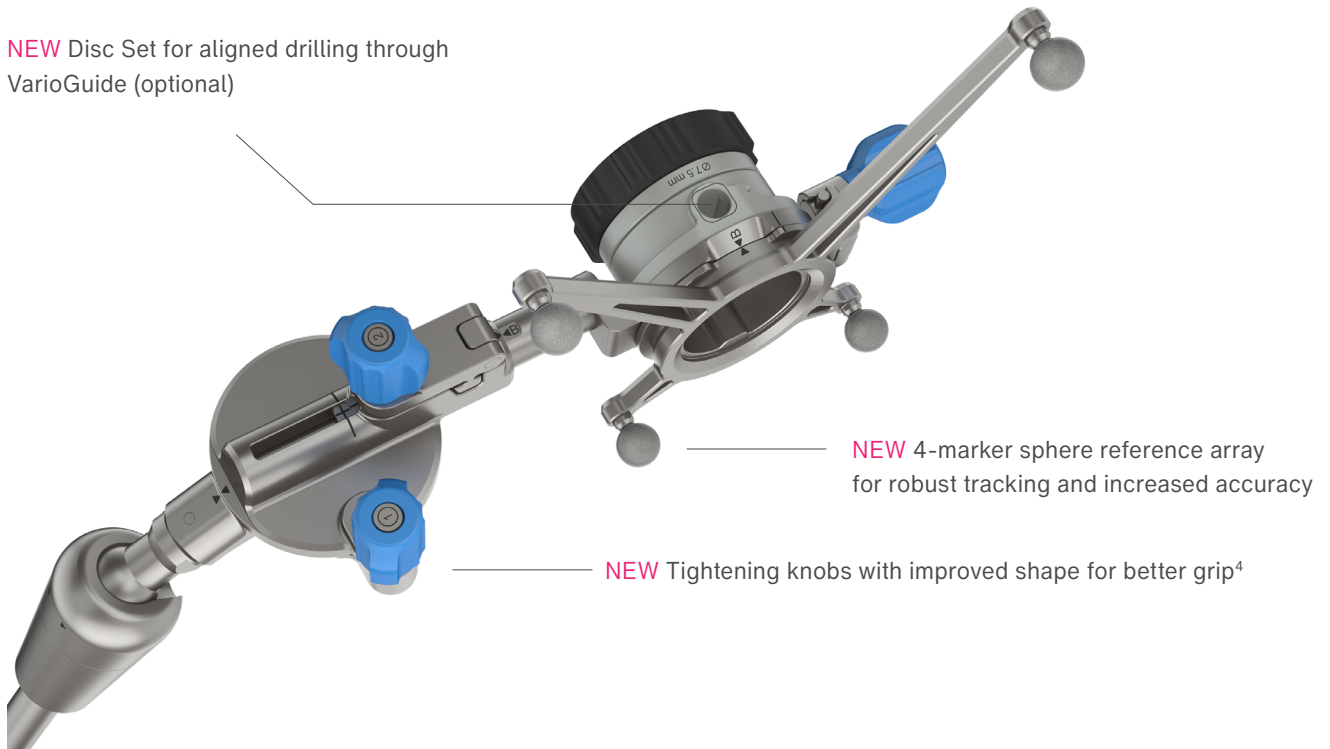
Clinical evidence

- With VarioGuide, patients experience significantly less discomfort, as measured by the Visual Analogue Scale (VAS), than with frame-based biopsy procedures[1]

- VarioGuide achieves similar clinical accuracy for cranial biopsy procedures (target error of 2.90 ± 1.26 mm) as the frame-based method (target error of 2.65 ± 1.12 mm)[1]

- VarioGuide achieved high clinical accuracy (100 % diagnostic yield) and low morbidity in cranial biopsy procedures on 10 pediatric patients with diffuse pontine gliomas (DIPG)[2]

- Total procedure time was significantly reduced with frameless VarioGuide, which took an average of 59 ± 31 minutes compared to 84 ± 27 minutes with the frame-based method[1]

VarioGuide with attached Cranial Drill Disc Set

NEW Disc Set for aligned drilling through
VarioGuide (optional)

NEW 4-marker sphere reference array
for robust tracking and increased accuracy

NEW Tightening knobs with improved shape for better grip[4]

Cranial Biopsy Drill Kit

Alignment Guide Tube

NEW 3.8 mm Alignment Guide Tube
(10 x use) for aligned drilling along
the planned trajectory

Two flushing windows allow cleaning of the burr hole

Integrated teeth add to a stable
fixation to the patient's skull

Drill Bit with Drill Depth Stop

Depth Stop suitable for 3.8 mm drills to limit drilling depth. Software-supported measurement of bone thickness for setting depth stop

Screwdriver for tightening the Drill Depth Stop

3.4 mm (3.8 mm outside diameter) single-use Drill Bit

Alignment Bone Anchor

NEW 2.1 mm (3.8 mm outside diameter) Alignment Bone Anchor (10 x use) with thread for rigid fixation between head holder, patient's skull and VarioGuide
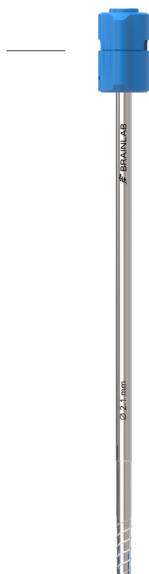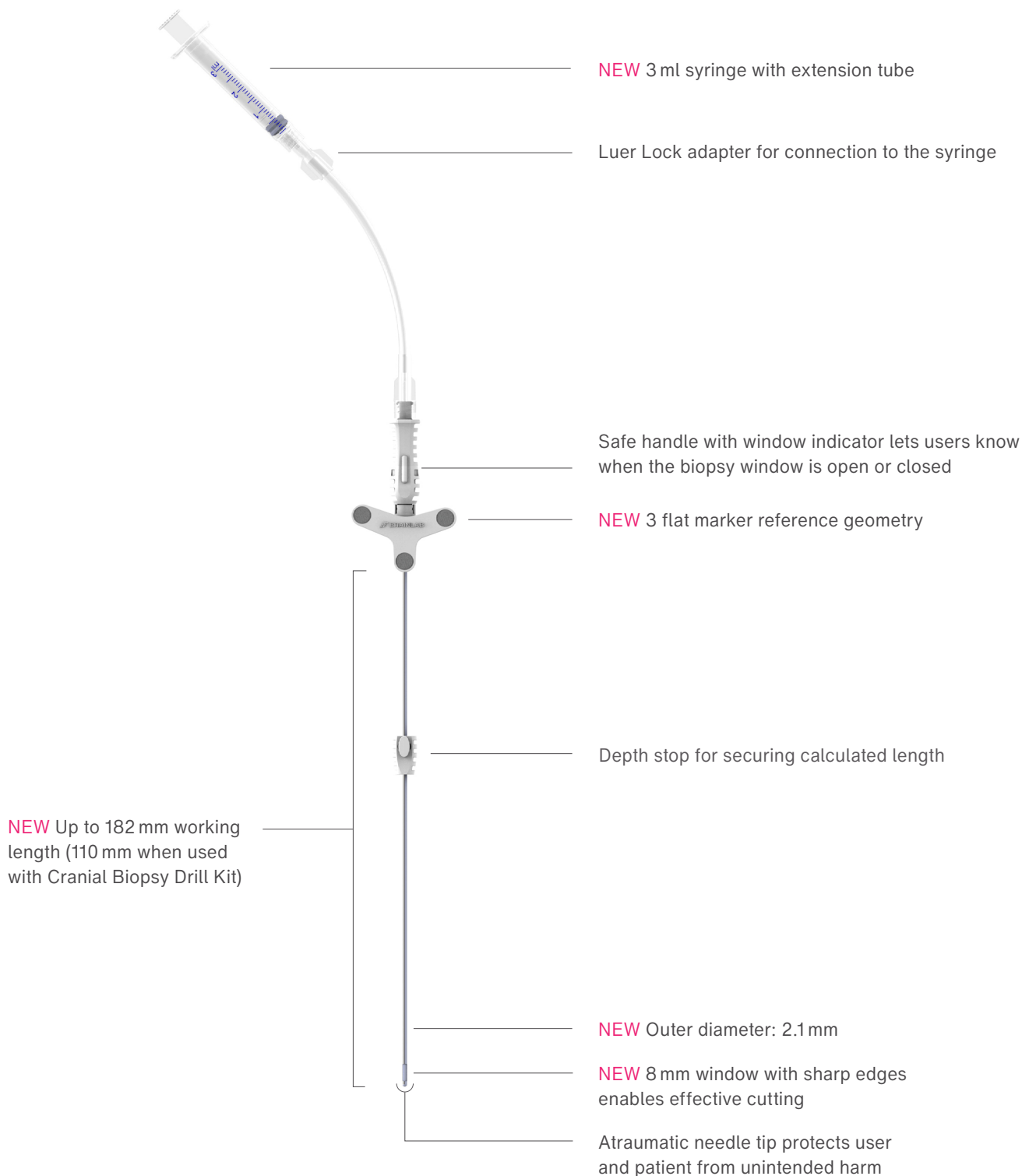
Reusable & limited use components: All components are autoclavable and can be securely stored in the VarioGuide Alignment System sterilization tray. The Alignment Guide Tube and Bone Anchor are intended for use in up to ten surgeries. The Drill Bit is single-use.

Technical specifications
Disposable Pre-calibrated Biopsy Needle

The Disposable Pre-calibrated Biopsy Needle is available in packs of five.

NEW 3 ml syringe with extension tube

Luer Lock adapter for connection to the syringe

Safe handle with window indicator lets users know when the biopsy window is open or closed

NEW 3 flat marker reference geometry

Depth stop for securing calculated length

NEW Up to 182 mm working length (110 mm when used with Cranial Biopsy Drill Kit)

NEW Outer diameter: 2.1 mm

NEW 8 mm window with sharp edges enables effective cutting

Atraumatic needle tip protects user and patient from unintended harm

1 Bradac et al. (2017): World Neurosurgery, DOI: 10.1016/j.wneu.2017.04.104
2 Joud et al. (2020): Neurochirugie, DOI: 10.1016/j.neuchi.2020.05.007
3 Compared to previous version: Disposable Pre-calibrated Biopsy Needle
4 Compared to previous version: VarioGuide