



# Tomorrow's medical robot today



## BUILT FOR SAFETY

Our class I medical device **decreases user radiation and patient radiation** thanks to its navigated alignment, misalignment detection capabilities and reduced need for control scans.



## SMOOTH SAILING FROM THE GET-GO

**Fast setup**, and users get proficient with the system after only a few cases - while keeping their team from making changes to the usual workflow.



## ALL-ENCOMPASSING TURNKEY SOLUTION

Micromate comprises a full-fledged portfolio that **supports most imaging modalities** and is compatible with every standard table and biopsy and ablation needles.



## SPOT-ON, EVERY TIME

Our table-mounted robot and live-imaging features grant Micromate users **full-body accuracy**.



## FAST AND ALL-AROUND

Our small robot grants the physician up close or 360° access (even inside the gantry) while **reducing intervention time**.



**Micromate solves the four essential problems all medical robotics should tackle: ease of use, accuracy, consistency, and affordability.**

**Dr. Marco van Strijen**  
St. Antonius Hospital, Netherlands

# Seamless workflow integration with no missing features



## SETUP

Seamlessly mount the robot to any standard table, load DICOM data, and automatically register in a few minutes.



## INTRAOPERATIVE PLANNING

Use the pre- and intraoperative scans with a proprietary, intuitive software to accurately plan your single or multi-needle intervention without angular limitations.



## ALIGNMENT

Accurately perform an automatic or joystick-controlled alignment to your planned trajectories within seconds with the help of navigation and live imaging.



## INSTRUMENT INSERTION

Securely advance your instrument of choice. Lateral deviations after instrument insertion are signaled by the system, allowing for correction.

## Movement Range

40 mm and 30° from center position  
Pre-positioning with Positioning Arm with 7 DOF and 40cm range  
The position on the table can be adjusted along the table's length

## Clinical Accuracy

Average accuracy of alignment to the trajectory:  
Average angular deviation to the trajectory:

## Fluoroscopy guidance

$0.43 \pm 0.50$  mm  
 $0.79 \pm 0.41^\circ$

## Optical CT navigation

$1.04 \pm 0.60$  mm  
 $0.75 \pm 0.47^\circ$

## Maximum Load

Robot: Instruments up to 1kg without interruption of motion (halt at 40N)  
Positioning Arm: 5 kg without slippage when fully extended

## Compatible Image Modalities

Fluoroscopy, Cone-Beam CT, CT-Fluoroscopy and CT  
Ultrasound under development

## Planning and Navigation

Yes, using pre- and intraoperative scans  
Optical navigation capabilities available, with disposable tracker and without the need for dynamic referencing

## Integration into 3rd party navigation systems

Yes, through proprietary API

## Guided Instruments

Instruments from 8-21G  
US: cleared for instruments from 8-19G

## Product Classification

EU: System according to article 22 of the Medical Device Regulation (MDR) regulation 2017/745  
US: Class II, 510(k) cleared for CT Navigation



## For more information

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