



Software-Based Guidance & Verification for Minimally-Invasive Spine Surgery

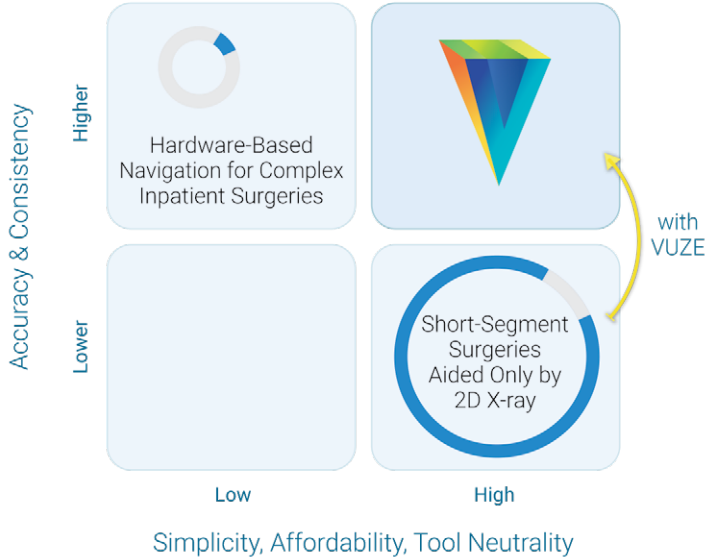
The mission of VUZE Medical is to create an improved Standard of Care for millions of spinal stabilizations performed annually. Despite the challenging anatomy, the “neglected majority” of those interventions remains assisted only by 2D X-ray. Increasingly, it seeks to migrate to lower-cost outpatient and ambulatory settings, which necessitates being minimally-invasive, which underscores the dependence on X-ray.

The VUZE™ System is a much-needed software-based complement to today’s surgical navigation systems. Those all employ elaborate hardware (camera arrays, on-tool markers, on-body references, often an in-OR CT) for navigating on a 3D scan. All necessitate modified surgical tools, cumbersome preparations and a restrictive workflow. Despite being available for decades, they are still applied mainly to complex inpatient surgeries that account for a minority of the market.

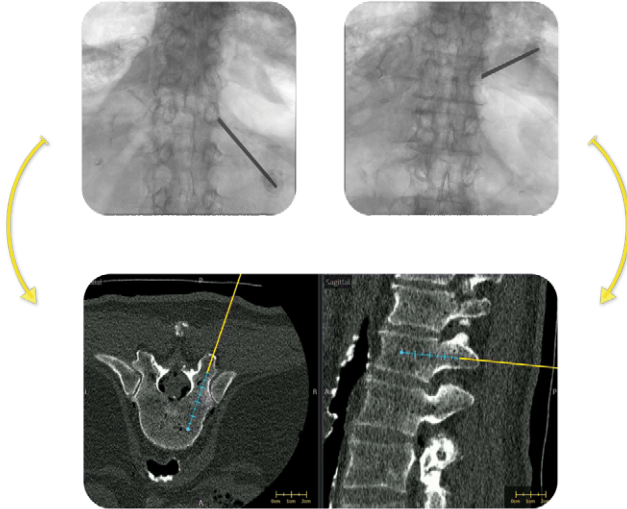
VUZE requires only a standard 2D X-ray and an off-the-shelf PC and works with unmodified surgical tools. With proprietary software, it overlays tools seen in live 2D X-Rays on matching vertebral cross-sections from a standard pre-operative CT or a prior in-OR 3D scan. Furthermore, only top-view (AP) X-rays are used and lateral images are no longer needed. And as in the traditional workflow, the display is updated instantly for every new X-ray image. [Watch At-a-Glance](#)

VUZE has already received its first FDA 510(k) clearance and is patented worldwide. Early clinical use in minimally-invasive thoraco-lumbar fixations and augmentations demonstrates very high accuracy. Meanwhile the simplicity, affordability and tool neutrality of common X-ray guidance are preserved, with the latter now software-controllable. Applicability is foreseen in further spinal (e.g., endoscopy, pain therapy) and skeletal interventions. [Watch Surgeon Impressions](#)

VUZE Medical was incorporated in 2017 in Israel. A ten-person team with seasoned leadership brings strong expertise in adding computer guidance to common interventions, including twice developing an improved Standard of Care: superDimension in bronchoscopies (now Medtronic, ~1,000 installations) and SyncVision in coronary catheterizations (now Philips, ~4,000 installations).



using only a 2D C-arm and a PC running the VUZE™ software



VUZE overlays surgical tools from intra-op AP X-rays on axial and sagittal views from a standard pre-op CT

- NO cameras | NO markers
- NO references | NO tool modifications