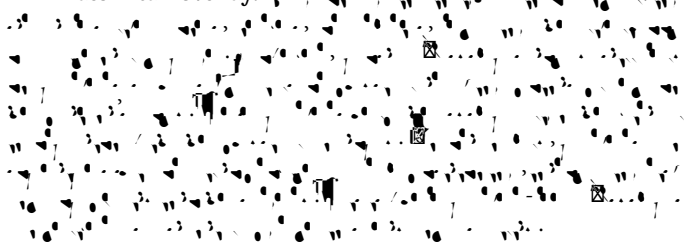


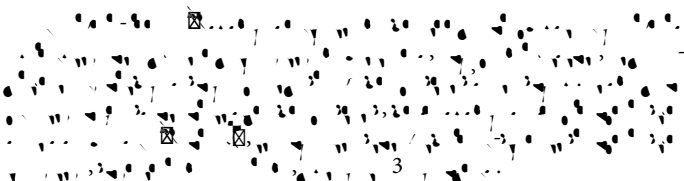
Transforming Robotic Surgery: The Influence of Marker-Free Augmented Reality on Accuracy and Safety

Chang Kim*

Anatomical overlay:



Marker-free AR: a new frontier in surgical safety



Key advantages of marker-free AR

Increased accuracy:



Reduced setup time:



Enhanced safety:



Improved visualization:



Streamlined workflow:



Core technologies driving marker-free AR

Computer vision:



AI and machine learning:



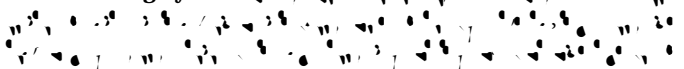
3D imaging and mapping:



Applications in surgery

Marker-free AR systems can be applied across a broad spectrum of surgeries, including

Neurosurgery:



Orthopedic surgery:



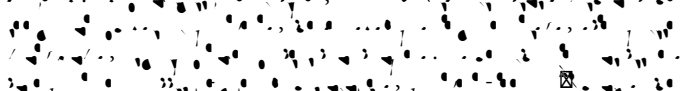
Cardiovascular surgery:



Ophthalmology:



Conclusion



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