



Editorial for current state of intraoperative imaging in spinal surgery

This series of *Annals of Translational Medicine* presents a collection of review articles on the current state of intraoperative imaging in spinal surgery. The rates of spine surgery and spinal instrumentation have increased tremendously in the past two decades. This increase has been accompanied by technological innovations and advances that are expanding the horizon of spinal surgery and making these procedures increasingly feasible, safe and efficient for the management of a wide range of disorders.

Intraoperative image-guidance in particular has undergone tremendous advancements in recent years, evolving from two-dimensional imaging modalities such as 2D fluoroscopy or serial radiography to computer assisted navigation systems that provide real-time visualization of instrumentation on a three-dimensional map of the patient's anatomy in order to provide better visualization and increase accuracy, and more recently the integration of these navigation systems with robotics with the goal of improving dexterity, reducing fatigue and dampening physiological tremor, thereby improving accuracy and precision, as well as the adaptation of augmented reality and virtual reality in spinal surgery to improve operative and teaching experiences.

Given the rapid rate of evolution of these technologies as well as the wide variability in surgical procedures and surgical techniques for spinal surgery, this series aims to provide an in-depth and consolidated review of the numerous intraoperative imaging modalities available as they relate to various types of spinal surgery.

We are extremely thankful to all the authors for their invaluable contributions to this series. We hope you find these reviews to be interesting and educational. We believe this series will not only provide clinically relevant information to surgeons, but will also serve as the foundation for future research.

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Footnote

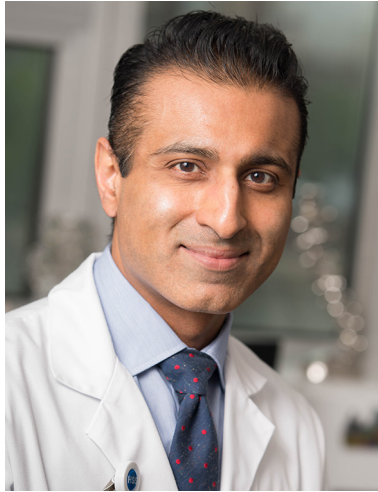
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Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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