AI in Orthopedic Surgery What is this fuzz all about

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INTRODUCTION:

Artificial intelligence (AI) is currently revolutionizing the field of medicine. Orthopedic applications in diagnoses, surgical planning, practice management and coding and reimbursement currently exist. Deliverables, functionality, pricing granularity and ease of use remain a mystery for most surgeons. The objective of this study is to investigate the use of AI in orthopedics and summarize the functionality and pricing of the available products.

METHODS:

We performed an extensive and detailed internet and AI engines search on all products that claimed to provide AI services in orthopedic surgery. We focused in products that help with practice management, electronic medical record (EMR), patient education and condition management, surgical planning, diagnostics, and X-ray/image reading. We summarized the information available from the websites and requested missing information. We focused on the specific deliverables, granularity of pricing and compatibility with existing software.

RESULTS:

We identified 59 companies that provide AI services that are   specific for orthopedic surgery. These include EHR/EMR, Practice management, Image reading, Patient education and management, surgical planning, diagnostics, and X-ray and image reading. Pricing was partially available in 15% of the websites, deliverables on 14%, granularity of pricing on 85%, and compatibility with existing software on 46%. Deliverables, granularity of pricing, and compatibility with existing software were therefore not readily available in 86%, 85%, and 54% of the cases, respectively. We then requested general information by sending out emails and requesting extensive and specific information.

DISCUSSION AND CONCLUSION:

Multiple AI driven products for orthopedic surgery currently exist. The information available on deliverables for each product is fragmented and pricing is not transparent. Orthopedic surgeons that want to utilize these tools should request references, compare the available products and be extremely cautious. Complete granularity and clear pricing need to be assessed before embarking on its use.