The Economic Value of an Innovative Knee Implant System for Total Knee Arthroplasty
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BACKGROUND
The ATTUNE™ Knee System is a next-generation innovative total knee arthroplasty (TKA) system developed by DePuy Synthes. Recombinant factor VIIa (rFVIIa) for the treatment of patients with von Willebrand Disease (VWD) requiring knee replacement. When compared with conventional contemporary TKA systems, innovative TKA systems are expected to improve patient functional status and knee implant survivorship.

OBJECTIVE
This study aimed to illustrate the expected economic value of a recently introduced innovative TKA system for patients with osteoarthritis (OA) requiring TKA. When compared with conventional contemporary TKA systems, a separate economic analysis was conducted to determine the incremental cost-effectiveness of the ATTUNE Knee System compared with a contemporary TKA system. Results: A Markov model was developed to model the cost-effectiveness of an innovative TKA system compared with a contemporary TKA system among patients with OA requiring knee replacement. The model design distinguished between the innovative and contemporary TKA systems in terms of functional status after surgery and implant survivorship.

METHODS
A Markov model was developed to model the cost-effectiveness of an innovative TKA system compared with a contemporary TKA system among patients with OA requiring knee replacement. The model design distinguished between the innovative and contemporary TKA systems in terms of functional status after surgery and implant survivorship.

RESULTS
The model was run for extended simulation time periods, and sensitivity analyses were performed to test the robustness of the model's results.

CONCLUSIONS
Although TKA is a successful intervention, there is potential for innovative TKA systems to provide improved clinical outcomes and cost-effectiveness.

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REFERENCES
For a complete list of references, please visit: http://www.ispor.org/research_study_digest/research_index.asp.