

the most affected dimension of the CarerQoL-7D was physical functioning.

**Conclusions.** Caring for people with drug-resistant FOS has a negative impact on the QoL of caregivers, particularly in the domains of self-care and physical functioning.

## PP180 Optimal Treatment Sequence For Targeted Immune Modulators For The Treatment Of Moderate To Severe Ulcerative Colitis

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**Introduction.** Several targeted immune modulators (TIMs) have demonstrated effectiveness in moderate-to-severe ulcerative colitis, including adalimumab, golimumab, infliximab, infliximab biosimilars, tofacitinib, ustekinumab, and vedolizumab. In addition to assessing individual TIMs, evaluating TIM sequences can inform clinical care as well as coverage and reimbursement policies. Our objective was to identify optimal treatment sequences based on maximum net health benefit (NHB), lowest total cost (cost minimizing), quality-adjusted life-year (QALY) maximization, or convenience (avoidance of intravenous treatments), and to evaluate their cost effectiveness compared with conventional treatment from the health sector perspective.

**Methods.** We developed a Markov model with eight-week cycles and a lifetime time horizon. The health states were active, clinical response without remission, remission, and death. TIM efficacy was informed by a network meta-analysis conducted by the Institute for Clinical and Economic Review. Sequences were generated by ranking TIMs and then conventional treatment according to NHB, cost minimization, QALY maximization, or convenience and combining top ranked TIMs in the biologic naïve and biologic experienced populations. NHB was calculated at USD 150,000 per QALY. Probabilistic sensitivity analysis (PSA) was undertaken to estimate the probability of each sequence having the highest NHB rank, QALY maximizing rank, and cost-minimizing rank.

**Results.** Twenty-one sequences were evaluated. The sequence with the highest NHB was infliximab followed by tofacitinib (-0.12 QALYs), which also had the lowest incremental costs (USD37,266). For orally and subcutaneously administered TIMs, the sequence of golimumab-tofacitinib had the highest NHB (-0.34 QALYs). Ustekinumab-vedolizumab was not only the top ranked sequence as measured by QALY maximization (0.172 incremental QALYs), but it also had the highest total incremental cost (USD166,094). Results of the PSA were consistent with deterministic rankings for the top-ranking sequences and showed that the top two or three regimens were close in magnitude.

**Conclusions.** The optimal sequence with regard to NHB and cost minimization was infliximab or biosimilars, followed by tofacitinib, adalimumab, or vedolizumab. Sequences that generated the most QALYs began with ustekinumab, followed by vedolizumab, tofacitinib, and adalimumab.

## PP184 Twenty Years of Health Technology Assessments on Robotic Assisted Surgery: A Summary

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**Introduction.** Da Vinci robotic-assisted surgery (RAS) has been evaluated by health technology assessment (HTA) organizations across the world. This study aimed to analyze the existing HTA reports over years, countries, and procedures.

**Methods.** Publicly available health technology appraisal reports on RAS published from January 2000 to November 2020 were identified via a targeted literature search. The literature search was conducted in PubMed, the Centre for Reviews and Dissemination database, the International Network of Agencies for Health Technology Assessment database, and Google scholar. Reports related to the da Vinci RAS were included. Full texts of reports were used for the analysis.

For the HTAs that recommended RAS, the directional conclusion was considered as positive. For HTA reports that discouraged the use of RAS, the directional conclusion was considered as negative. The rest were considered as neutral. The reports were analyzed by year, country, and procedure.

**Results.** We identified 65 HTA reports comprising 128 procedure-level assessments of RAS by 42 HTA organizations in 21 countries over 20 years. The annual number of assessments increased over time. The countries that completed the most assessments were Sweden (14 reports, including 15 procedure-level assessments: 13% positive and 80% neutral) and Canada (11 reports, including 20 procedure-level assessments: 65% positive).

The topics of the assessments covered 27 surgical indications in urology, gynecology, thoracic, general, and ear, nose, and throat. The conclusions of the HTAs varied by surgical indication. Prostatectomy (33 reports: 85% neutral or positive) was the most widely assessed surgical indication, followed by hysterectomy (16 reports: 81% neutral or positive), nephrectomy (15 reports: 73% neutral or positive), and rectal resection (10 reports: 100% neutral or positive).

**Conclusions.** The number and breadth of HTAs on RAS have grown at an increasing rate over the last 20 years. The directional conclusion of assessments varied by procedure and country. Further analysis is warranted to understand the factors contributing to HTA conclusions on RAS.

## PP195 Cost Utility Of Transcatheter Aortic Valve Implantation For Patients With Inoperable Severe Aortic Stenosis In Brazil

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**Introduction.** Transcatheter aortic valve implantation (TAVI) represents a new treatment option for aortic stenosis. This study