Poster Tour Guide Packet

Poster Session:	**In-Person and Virtual Poster Session 3**
Tour Name:	**Oncology**
Tour Date/Time:	Tuesday, 8 November 2022, 2022, 12:30 - 13:15
Tour Area:	Area B, Hall X2, Level -2

Acceptance Code:	EE64
Board Number:	1B
Abstract Title:	Healthcare Resource Utilisation and Medical Costs Among Patients With High-Grade Serous Ovarian Cancer in a Real-Life Setting in Finland: The OCRWE-Finland Study
Presenting Author:	Barbara Mascialino

Abstract Body:

OBJECTIVES: The OCRWE-Finland study describes the real-life experience of patients with ovarian cancer (OC), including disease characteristics, treatment patterns, outcomes, and healthcare resource utilisation (HCRU). This abstract focuses on HCRU and associated medical costs.

METHODS: OCRWE-Finland is a multicentre, retrospective, noninterventional study collecting medical records from Helsinki, Turku, and Tampere University Hospitals. Patients with newly diagnosed ovarian, fallopian tube, or primary peritoneal cancer who received OC treatment in these hospitals during 2014–2019 were included, covering ≈50% of the Finnish OC population in that period. Costs were retrospectively collected. Results are presented from the healthcare perspective.

RESULTS: A total of 1711 patients with OC (mean age, 65.9 years) were identified, including 867 patients with high-grade serous OC (HGSOC; mean age, 68.6 years). For 1L treatment, 59% of HGSOCs were treated with primary debulking surgery, 18% with neoadjuvant chemotherapy and interval debulking surgery, and 16% with chemotherapy alone. In total, there were 442 stage III and 203 stage IV HGSOC patients (HGSOC 3–4s). During the first treatment year, these patients had 13.8 outpatient visits and 1.2 inpatient admissions, with an average hospitalization duration of 5.4 days. During the study period, the total HCRU cost for HGSOCs was 22,673,000 EUR, including inpatient admissions, emergency visits, and outpatient visits, corresponding to ≈2.6% of the Finnish total yearly health expenditure on cancer care. The average cost per HGSOC 3–4 patient during the first year after diagnosis was 14,800 EUR for patients without visible residual disease after surgery, and 23,700 EUR when residual disease was present. These costs decreased over time (year 2: 8100 EUR and 11,000 EUR, respectively).

CONCLUSIONS: HGSOC was associated with high HCRU and consequent healthcare costs. In our study, the presence of residual disease, which is indicative of more advanced disease, was associated with increased HCRU and direct costs for patients with HGSOC.

Tour Guide's Questions for Starting Q&A (Each poster will have ~5 minutes for Q&A with attendees/Tour Guide)

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Tour Area:	Area B, Hall X2, Level -2

Acceptance Code:	EE461
Board Number:	2B
Abstract Title:	Cost-Effectiveness of Nivolumab As an Adjuvant Treatment of Muscle-Invasive Urothelial Carcinoma at High Risk of Recurrence with Tumor Cell Pd-L1 Expression ≥ 1% in Denmark
Presenting Author:	Farzam Kamgar

Abstract Body:

OBJECTIVES: To assess the cost-effectiveness of nivolumab versus surveillance in Denmark for the adjuvant treatment of patients with muscle-invasive urothelial carcinoma (UC) with high risk of recurrence and tumor cell PD-L1 expression ≥ 1% who have undergone radical resection.

METHODS: A three-state (disease-free, recurrent, death) Markov model with a 20-year time horizon was developed from a limited societal perspective. Outcomes of interest were life-years (LYs), quality-adjusted LYs (QALYs), and incremental cost-utility ratios (ICURs). Patient characteristics, efficacy (disease-free survival) and safety (adverse event frequencies) data, and EQ-5D-5L health state utilities (mapped from the EQ-5D-3L in alignment with the Danish Medicines Council's guidelines) were derived from the CheckMate 274 study. Postrecurrence outcomes were modelled as one-off total costs and QALYs based on the local shares of first-line therapies available for the treatment of metastatic UC in Denmark. Costs and long-term health outcomes associated with metastatic UC treatments were based on published duration of therapy and survival data or prior health technology appraisals reporting total estimated costs and QALYs. An annual discount rate of 3.5% was applied to costs and health outcomes. Deterministic, probabilistic sensitivity analyses, and scenario analyses were conducted to measure model robustness.

RESULTS: Nivolumab was associated with increased total LYs and QALYs and higher costs (8.14, 6.72, and DKK 928,773, respectively) versus surveillance (6.0, 4.89, and DKK 616,614, respectively). This resulted in an ICUR of DKK 170,871/QALY gained. All tested scenarios and varied inputs in the deterministic sensitivity analyses resulted in less than 15% and 30% changes from the base-case ICUR, respectively. Probabilistic sensitivity analyses confirmed the robustness of the model results (average ICUR DKK 170,595/QALY), with nivolumab having a 97% probability of being cost-effective at a willingness-to-pay threshold of DKK 500,000/QALY gained.

CONCLUSIONS: Nivolumab is estimated to be a life-extending and cost-effective adjuvant treatment for muscle-invasive UC in Denmark.

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Tour Area:	Area B, Hall X2, Level -2

Acceptance Code:	EE651
Board Number:	3B
Abstract Title:	Cost-Effectiveness Analysis of Pembrolizumab Plus Chemotherapy in the First-Line Treatment of Patients With Metastatic Triple-Negative Breast Cancer in Greece
Presenting Author:	Nikolaos Themistoklis Yfantopoulos

Abstract Body:

OBJECTIVES: Pembrolizumab combinations are indicated for first-line treatment of patients with locally recurrent unresectable, or metastatic triple-negative breast cancer (mTNBC) whose tumors express PD-L1 (defined as a combined positive score ≥10). The present study estimated the cost-effectiveness of Pembrolizumab plus taxane versus taxane alone, or atezolizumab plus nab-paclitaxel in Greece.

METHODS: A partitioned survival model with three health states (pre-progression, progressed disease, and death) was adapted from a Greek payer perspective over a 20-year time horizon. Utility values and safety data applied in the model were extracted from the KEYNOTE-355 and IMPASSION-130 clinical trials. A network meta-analysis was performed to quantify the relative efficacy of Pembrolizumab against other examined treatments, which were not included in the clinical trial KEYNOTE-355. Primary outcomes were quality-adjusted life-years (QALYs), total costs and incremental cost-effectiveness ratios (ICER)s per QALY gained. Both costs and outcomes were discounted at 3.5% per annum. A Deterministic Sensitivity Analysis(DSA) was conducted to identify the input parameter's impact on ICER and a probabilistic sensitivity analysis (PSA) to account for collective parameter's uncertainty.

RESULTS: The total cost of Pembrolizumab plus taxane (PpT) (-meaning in combination with either paclitaxel or nab-paclitaxel-), taxane monotherapy and the combination of atezolizumab plus nab-paclitaxel (ApN) were compared. The costs were estimated at €125,695, €66,269, and €101,595, respectively. PpT was more effective than monotherapy of taxane or ApN with 1.34 and 0.46 more QALYs gained, respectively. The incremental analysis showed that PpT resulted in an ICER of €44,400 and €52,500 per QALY gained versus taxane and ApN, respectively. The DSA indicated that the most influential parameters did not significantly change the analysis results. PSA confirmed the deterministic analysis results.

CONCLUSIONS: The present economic evaluation proves that Pembrolizumab in combination with taxane is a cost-effective option (under the 52,770€/QALY threshold) compared to all available treatments in mTNBC in Greece.

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Tour Area:	Area B, Hall X2, Level -2

Acceptance Code:	EE138
Board Number:	4B
Abstract Title:	Healthcare Resource Use (HCRU) and Associated Costs Among Patients With Diffuse Large B-Cell Lymphoma (DLBCL) Treated with CAR-T Cells in France – A Real-World Study Using Data From PMSI
Presenting Author:	Stève Bénard

Abstract Body:

OBJECTIVES: Since 2017, CAR-T-cells therapy is a possible ≥3rd line treatment for DLBCL in France. This study aimed at describing HCRU and costs in DLBCL patients treated by CAR-T-cells according to failure status.

METHODS: This was a descriptive, retrospective, longitudinal study using secondary data from French hospital database (PMSI). DLBCL patients treated by CAR-T-cells were identified over 2017-2020 period. Patients were followed-up for 6 months after CAR-T-cells administration or until inpatient death, whichever occurred first. Patients were classified according to whether or not they had a failure within 6 months after CAR-T-cells administration, defined as receiving a new therapy or an inpatient death. HCRU and costs were assessed monthly between 3 months before and 6 months after CAR-T-cells administration.

RESULTS: Among the 534 patients treated with CAR-T-cells, 362 had sufficient follow-up or a recorded inpatient death. Among them, 207 (57.2%) presented a failure. Ninety-five (45.9%) of them died during the follow-up period. Mean (±SD) ages were 59.1 (±11.7) and 60.6 (±11.2) years among patients with and without failure, respectively. Each month, 75% of patients in failure group had ≥1 hospitalization vs. 25 % in non-failure group. In failure group, 50% had ≥1 chemotherapy and 30% had ≥ 1 rituximab administration, monthly. Overall associated costs were similar before (≈€5,000) and during CAR-T-cells stay (≈€360,000) in both groups. From the 2nd month post-CAR-T-cells administration, mean (±SD) hospital costs ranged between €4,775 (±6,110) and €6,621 (±10,414) in failure group, and between €750 (±2,719) and €2,149 (±15,218) in non-failure group. This study presents limits related to claims databases and reflects the clinical practice in the first years of CAR-T availability, prior to last guidelines update.

CONCLUSIONS: Patients without failure within 6 months post CAR-T cells have close-to-zero monthly hospital costs. Meanwhile, patients with failure must be frequently hospitalized and treated, leading to greater healthcare costs.

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Tour Area:	Area B, Hall X2, Level -2

Acceptance Code:	HTA232
Board Number:	5B
Abstract Title:	Indirect Treatment Comparison Methods in NICE Immuno-Oncology Technology Appraisals: Implementation and Critique
Presenting Author:	Anna Pagotto

Abstract Body:

OBJECTIVES: In recent years, immuno-oncology (I-O) therapies have emerged as effective treatment options for cancer. Their efficacy has been compared to chemotherapy and other treatments in Health Technology Assessment submissions, using indirect treatment comparisons (ITCs) when head-to-head trials were not available. We evaluated the appraisal of I-O ITCs by the National Institute for Health and Care Excellence (NICE) in the UK and summarised the different approaches and main critiques to their implementation.

METHODS: I-O appraisals published between 2011-2022 were identified from the NICE website based on the Cancer Research Institute classification (excluding terminated appraisals). ITC methods and Evidence Review Groups (ERGs) and NICE committees' critiques were extracted from Final Appraisal Documents.

RESULTS: Of the 92 I-O appraisals identified, 64.1% (59/92) included an ITC, most commonly a network meta-analysis (NMA; 50.8%, 30/59). Matching-adjusted indirect comparisons (MAICs) were frequently included in I-O submissions (30.5%, 18/59), while naïve comparisons were also conducted (28.8%, 17/59), mostly alongside MAICs. Simulated treatment comparisons were rarely performed (5.1%, 3/59). Approximately half of the ITCs (49.2%, 29/59) were considered acceptable for decision-making by NICE; most of these treatments were then recommended for reimbursement (82.8%, 24/29). Substantially fewer treatments were reimbursed when an ITC was considered unsuitable for decision-making (43.3%, 13/30). The main criticism highlighted by the ERGs and NICE committees concerned the choice of ITC method (e.g. naïve comparison instead of MAIC), the comparator study selection (e.g. study design heterogeneity, patient cohort differences), the statistical analyses performed (e.g. choice of NMA model, insufficient matching of effect modifiers in MAICs), and the poor face validity of the results.

CONCLUSIONS: Only half of the I-O ITCs were considered acceptable by NICE for reimbursement decision-making, with NMA being the most widely used and acknowledged method. Manufacturers should ensure methodological validity and clinical plausibility to increase their chances of I-O treatment approval.

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Acceptance Code:	SA6
Board Number:	6B
Abstract Title:	Challenges in Economic Modelling of Adjuvant Cancer Therapy for Health Technology Assessments
Presenting Author:	Tray Brown

Abstract Body:

OBJECTIVES: Economic modelling of adjuvant cancer therapy is subject to several challenges, including post-recurrence treatment options and limited overall survival (OS) data, reducing applicability of traditional oncology approaches, such as partitioned-survival models. This study aimed to identify the most appropriate modelling approach for adjuvant therapies in the UK setting.

METHODS: A targeted literature review conducted in 2021 identified all National Institute for Health and Care Excellence (NICE) health technology assessments (HTAs) appraising adjuvant treatments. Output from this review was used to inform strategy for two nivolumab HTAs, alongside clinical insights.

RESULTS: Ten HTAs were identified: disease-free survival (DFS), invasive DFS and recurrence-free survival were the most relevant endpoints; limited OS data (immature or unavailable) was reported. Markov modelling was the most common approach (8 HTAs). Where the Markov approach was used, OS could use independent sources; published literature informed post-recurrence mortality (7 HTAs) and general population mortality was assumed for recurrence-free patients (cure assumption; 4 HTAs). Based on this review, Markov models were developed for nivolumab in the adjuvant treatment of oesophageal cancer and muscle-invasive urothelial carcinoma. Pre- and post-recurrence survival were derived from trial data and published literature, respectively. Cure was assumed for those recurrence-free at 5 years, based on smoothed hazard plots from trial data. Clinical experts validated this approach and relevant survival outcomes. Clinical benefits of nivolumab (life years and quality-adjusted life years) were predominantly accrued in the disease-free state. While outcomes varied by modelled population, the largest model drivers were DFS extrapolations and the timing of cure assumption.

CONCLUSIONS: It is important that adjuvant cancer modelling approaches are able to address relevant challenges (e.g. limited OS data). The Markov structure is most appropriate for the adjuvant setting, allowing application of published literature sources and flexible cure assumptions. Validation from external experts and sources remains essential.

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