ITCs/MTCs except for the earliest one (TA129). Statistical methods used in the base case were: fixed effects synthesis (n=5); match-adjusted indirect treatment comparisons (MAICs) (n=2), MAICs and regression with patient-level data (n=2); random effects synthesis (n=1) and a crude ITC (n=1). Most analyses produced constant hazard ratios (n=9) with the remainder being time-varying hazards (n=2). Number of trials in each network increased from a mean of 3.5 (3-4) in 2007-2013 across 2 submissions to 4.3 (2-7) in 2014-2020 across 9 submissions. Key ERG criticisms included: heterogeneity across studies, especially differences in line of therapy (n=4); sparse network (n=3); similarity/transitivity assumption not assessed or held (n=3); criticisms regarding choice of characteristics adjusted for in the MAIC (n=3); residual bias not assessed in the MAIC (n=2); unclear presentation of ITC/MTC and code used missing from submission (n=2). ***Conclusions:*** This review suggests the utilisation and complexity of ITCs/MTCs has increased over recent years. Whilst additional uncertainty in clinical and cost-effectiveness estimates is expected in the absence of direct evidence, key ERG criticisms show that companies must ensure care is taken to fully understand and follow NICE TSDs to conduct and report ITC/MTC results appropriately.

PCN48
ADAPTING PREFERENCE-BASED UTILITY MEASURES TO CAPTURE THE IMPACT OF CANCER TREATMENT-RELATED SYMPTOMS

Shah K,[1] Bennett B,[2] Lenny A,[3] Longworth L,[1] Brazier JE,[4] Oppe M,[5] Pickard AS,[6] Shaw JW[7]
[1]*PHMR Ltd, London, LON, UK,* [2]*Bristol-Myers Squibb, Uxbridge, BKM, UK,* [3]*PHMR Ltd, London, UK,* [4]*University of Sheffield, Sheffield, UK,* [5]*Axentiva Solutions, Tacoronte, Spain,* [6]*University of Illinois at Chicago, Chicago, IL, USA,* [7]*Bristol-Myers Squibb, Lawrenceville, NJ, USA*

It is important that patient-reported outcome (PRO) measures used to assess cancer therapies adequately capture the benefits and risks experienced by patients, particularly when adverse event profiles differ across therapies. This study explores the case for augmenting preference-based utility measures to capture the impact of cancer treatment-related symptoms. Arguments for or against the adaptation of utility measures were identified via a focused review of the literature on PROs in cancer and modifications of measures (e.g., EQ-5D 'bolt-ons', QLU-C10D, FACT-8D). Additional cancer treatment-related items could be specific (e.g., rash) or global. While specific items are easier to describe and understand, their use may miss rarer symptoms and those that are currently unknown but will arise from future medical advancements. The appropriate number of additional items, the independence of those items, and their impact on the psychometric properties of the core instrument require consideration. Alternatively, a global item could encompass all potential symptoms associated with any treatment for any disease. However, such an item may not be well-understood by general public respondents in valuation exercises. Further challenges include the decision about whether to generate *de novo* value sets for the modified instrument or to map to existing tariffs. The fluctuating and transient nature of treatment-related symptoms (e.g., nausea) may be inconsistent with the methods used in conventional valuation exercises. Fluctuating symptoms could be missed by sub-optimal measure administration timing. The addition of items also poses double-counting risks. In summary, the addition of treatment-related symptom items could increase the sensitivity of existing utility measures to capture known and unknown treatment-related symptoms in oncology, while retaining the core domains. However, more research is needed to investigate the challenges, particularly regarding valuation. We present a novel schematic to guide investigators in determining whether adapting an existing measure is necessary.

Cancer - Economic Evaluation

PCN51
SIR-SPHERES Y-90 RESIN MICROSPHERES VERSUS BEST SUPPORTIVE CARE IN THE TREATMENT OF UNRESECTABLE METASTATIC COLORECTAL CANCER REFRACTORY TO CHEMOTHERAPY: A COST-UTILITY ANALYSIS IN THE UK

Brennan VK,[1] Colaone F,[1] Shergill S,[1] **Pollock RF**[2]
[1]*SIRTEX Medical United Kingdom Ltd, London, UK,* [2]*Covalence Research Ltd., London, LON, UK*

Objectives: Treatment options for chemotherapy refractory metastatic colorectal cancer (mCRC) are relatively limited. Third-line systemic therapy options are currently restricted to regorafenib and TAS-102 (trifluridine/tipiracil), with selective internal radiation therapy (SIRT) providing another option for patients with liver dominant or liver limited metastases. The objective of the present analysis was to evaluate the cost-utility of SIRT with SIR-Spheres Y-90 resin microspheres relative to best supportive care (BSC) in the treatment of chemotherapy refractory mCRC from the perspective of the UK national healthcare payer. ***Methods:*** A cost-utility model was developed, utilizing a three-state Markov model structure to capture the progression of mCRC from progression-free survival to post-progression survival and death, informed by data from a retrospective cohort study of 224 patients with chemotherapy refractory mCRC. UK-specific unit costs were obtained from the literature, the British National Formulary, and National Health Service (NHS) England reference costs. Future costs and effects were discounted at 3.5% *per annum* over a lifetime time horizon. Probabilistic sensitivity analysis (PSA) and one-way sensitivity analyses were conducted, including an analysis in which SIRT work-up and procedure were conducted the same day with transradial access. ***Results:*** In the base case analysis, SIR-Spheres Y-90 resin microspheres resulted in an increase of 0.81 quality-adjusted life years (QALYs) from 0.69 QALYs with BSC to 1.50 QALYs. The improvement was accompanied by an increase in cost from £15,268 to £34,168, resulting in an incremental cost-utility ratio (ICUR) of £23,435 per QALY gained. With same-day transradial procedures, the ICUR decreased to £20,841. PSA reported a 96% likelihood of SIR-Spheres Y-90 resin microspheres being cost-effective versus BSC at a willingness-to-pay threshold of £50,000 per QALY gained. ***Conclusions:*** SIR-Spheres Y-90 resin microspheres are a cost-effective treatment option compared to BSC for patients with liver-dominant colorectal metastases from the perspective of a UK national healthcare payer.

PCN52
NEW INSIGHTS FROM CAR-T: AN ECONOMIC AND ORGANIZATIONAL PERSPECTIVE

Foglia E,[1] Garagiola E,[1] Ferrario LB,[1] Ladisa V,[2] Scorza A,[2] Rambaldi A,[3] Cairoli R,[4] Medaglia ML,[4] Simona M,[5] Omodeo Salè E,[5] Zinzani PL,[6] Esposti M,[7] Alberti L,[8] Marcias M,[8] Mulas MF,[9] Satta V,[8] Melis E,[8] Onnis S,[8] Croce D[1]
[1]*LIUC University, Castellanza, Italy,* [2]*IRCCS National Cancer Institute, Milan, Italy,* [3]*Papa Giovanni XXIII Hospital, Bergamo, Italy,* [4]*Niguarda Hospital, Milan, Italy,* [5]*European Institute of Oncology, Milan, Italy,* [6]*Institute of Hematology "L. e A. Seràgnoli", University of Bologna, Bologna, Italy,* [7]*Lodi Hospital, Lodi, Italy,* [8]*ATS Sardinia, Cagliari, Italy,* [9]*ASL Roma 4, Roma, Italy*

Objectives: The aim of this study is to analyse, from both economic and organizational perspectives, the different pathways of patients affected by Diffuse Large B Cell Lymphoma (DLBCL) in third-line therapy, with particular emphasis on novel target therapy approaches, as the Chimeric Antigen Receptor T-cell therapy (CAR-T), defining the level of economic sustainability for Italian Hospitals, with a reimbursement tariffs comparison. ***Methods:*** The economic evaluation considered four different pathways: CAR-T, Allogeneic (Allo-SCT), Autologous Stem Cell Transplant (ASCT) and Best Supportive Care (BSC). Process mapping and Activity Based Costing methodologies were applied, in order to collect the costs related to Allo-SCT, ASCT and BSC pathways, including adverse events. Administrative data on services provided (including diagnostic and laboratory examinations, hospitalizations, outpatients' procedures and therapies) to 47 third-line patients with lymphoma, were collected in different Italian Hospitals. The CAR-T pathway was mapped and evaluated based on opinions of a panel (9 experts) and literature evidence. Analysis and simulation of the reimbursement tariffs (DRGs) were also conducted. ***Results:*** The following average costs were registered, respectively 70,859.85€ only for CAR-T procedure (without considering therapy costs), 51,751.77€ for Allo-SCT, 64,408.92€ for ASCT and 29,558.41€ for BSC. A simulation of the Italian reimbursement tariffs revealed that Allo-SCT and ASCT pathways were sustainable, BSC reimbursement was lower than costs (-16.1%) and the definition of the CAR-T hospitalization tariff need to consider adverse events, for a proper pathway evaluation. In addition, the organizational impact of CAR-T introduction absorbed around 15,000€ in hospital investment (for infrastructures, internal training, meetings and coordination). ***Conclusions:*** Results show new economic evidence for healthcare decision-makers, in order to optimize the appropriateness of resources allocation. A specific focus on CAR-T resources absorption suggests the need to introduce a reimbursement tariff dedicated and adequate, both at hospital and NHS level, for the new CAR-T pathway.

PCN53
TREND OF HEALTHCARE COSTS AND SURVIVAL AMONG PATIENTS WITH LUNG CANCER: A REAL-WORLD ITALIAN STUDY

Andretta M,[1] Santo A,[2] Perrone V,[3] Poggiani C,[1] Giacomini E,[3] Sangiorgi D,[3] Degli Esposti L[3]
[1]*Health Technology Assessment Unit, Azienda Zero, Padova, Italy,* [2]*Lung Unit Ospedale P. Pederzoli - Presidio ospedaliero ULSS 9 Scaligera, Verona, Italy,* [3]*CliCon S.r.l. Health, Economics & Outcomes Research, Ravenna, Italy*

Objectives: To evaluate the direct healthcare costs for patients with lung cancer and to analyse the survival trend of these patients. ***Methods:*** In this observational retrospective study based on administrative databases of one Italian region, all adult patients with hospitalization discharge diagnosis for lung cancer (ICD-9-CM code: 162) were included during 01/2014—12/2018. The date of first diagnosis during this period was defined index-date. Patients were stratified by year of inclusion. Healthcare cost analysis related to lung cancer was performed from the perspective of the Italian National Health Service considering a 6-months period of follow-up. Costs items included antineoplastic agents (ATC code: L01), hospitalizations and outpatient services. Estimation of healthcare costs reproportioned for treatment-exposure period (defined as last date of semester of therapy dispensing, hospitalization, outpatient services) was provided for a 6-months period. ***Results:*** Overall,13,822 patients diagnosed with lung cancer were included. Total annual healthcare cost increased from €4,591.3 for patients included in 2014 to €6,231.4 for patients included in 2018. This increment was mainly due to antineoplastic therapies expenditure, which went from €402.1 in 2014 up to €1,750.5 in 2018. Half-yearly healthcare costs for treatment-exposure period were estimated to increase from €5,463.0 in 2014, to €11,629.8 in 2018, with cost-item related to