Conclusions: The result of the study suggests that the impact of Fluvestrant 500 for enhancing patient outcomes is dominating. Using line of Fluvestrant 500 prior to (Everolimus 0 mg + Exemestane) for treating metastatic breast cancer may have dominant effect on patient outcomes as a treatment strategy.
No conflict of interest.

1025 POSTER SPOTLIGHT

Should the Republic of Ireland introduce a national prostate-specific antigen testing programme for the secondary detection of prostate cancer? Results from a population-based cost-effectiveness analysis

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Background: Prostate Cancer (PCa) incidence in the Republic of Ireland (RoI) has steadily increased over the last two decades and is among the highest across Europe. From 1994 the use of prostate specific antigen (PSA) testing for secondary detection has also increased dramatically and is a leading factor in rising incidence rates in the RoI. The impact of increased PCa detection both on resource utilisation and quality of life (QoL) are not fully understood. Therefore, an economic evaluation of the introduction of several PSA-based screening strategies was undertaken.
Materials and Methods: Incidence and clinical data from the National Cancer Registry Ireland (NCRI) for men diagnosed with PCa in 2009 was used to inform a PCa care pathway in Ireland. A decision analytic framework was constructed around the care pathway comparing the economic impact of PSA testing versus current practice in the absence of a PCa screening strategy; the Markov model followed 100,000 men from age 30 to death. Unit costs were estimated using Irish reference costs, project-specific survey costs and the literature. Effectiveness of screening parameters and screening acceptance rates were derived from a range of randomised controlled trials (RCTs) and synthesised using the Oxford Model (Leal, 2010). Utility scores used in the estimation of the quality-adjusted life year (QALY) were collected from 2,500 PCa survivors. In additional scenario analyses, PSA clinical cut-off levels were varied between 3 ng/ml and 4 ng/ml to reflect European guidance and practice variation in the RoI. A healthcare payer's perspective was adopted and the maximum willingness-to-pay (WTP) threshold was set at €45,000 which is commonly used for the ceiling ratio in the adoption of healthcare interventions.
Results: The cost-effectiveness analysis adopting a lower PSA cut-off (>3 ng/ml) suggested that at the upper bound WTP threshold of €45,000 per QALY gain, a once-off screen at 50 years and 55 years was cost-effective (incremental cost-effectiveness ratios (ICER) were €29,000 and €31,222, respectively). When using the higher PSA cut-off (>4 ng/ml) consistent with current practice, the once-off screen at 50 years was cost-effective (ICER: €43,632).
Conclusions: Introducing a population-based, once-off PSA testing at ages 50 or 55 in the RoI could be deemed cost-effective. There is no doubt that PSA testing detects PCa; however, it cannot distinguish between cancer that leads to premature mortality and cancer that would have remained latent during a man's life and so result in high levels of over diagnosis and overtreatment which have consequences both in terms of costs and quality-of-life. This analysis contributes to the ongoing accumulation of evidence on the costs and benefits of PSA testing internationally and may inform decision making within the Irish healthcare system.
No conflict of interest.

1026 POSTER

Financial burden of cancer drug treatment in Lebanon

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Background: The Ministry of Public Health (MOPH) in Lebanon provides cancer drugs free of charge for uninsured patients who account for more than half the total caseload. Other categories of cancer care are subsidized under more stringent eligibility criteria. MOPH's large database offers an excellent opportunity to analyze the cost of cancer treatment in Lebanon.
Materials and Methods: Using utilization and spending data accumulated at MOPH during 20082013, the cost to the public budget of cancer drugs was assessed per case and per drug type.
Results: The average annual cost of cancer drugs was $6,475 per patient. Total cancer drug costs were highest for breast cancer, followed by chronic myeloid leukemia (CML), colorectal cancer, lung cancer, and NonHodgkin's lymphoma (NHL), which together represented 74% of total MOPH cancer drug expenditure. The annual average cancer drug cost per case was highest for CML ($31,037), followed by NHL ($11,566). Trastuzumab represented 26% and Imatinib 15% of total MOPH cancer drug expenditure over six years.
Conclusions: Sustained increase in cancer drug cost threatens the sustainability of MOPH coverage, so crucial for socially vulnerable citizens. To enhance the bargaining position with pharmaceutical firms for drug cost containment in a small market like Lebanon, drug price comparisons with neighboring countries which have already obtained lower prices may succeed in lowering drug costs.
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No conflict of interest.

1027 POSTER

Cost-effectiveness of lipegfilgrastim from the Mexican payer perspective

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Background: Recombinant granulocyte-colony stimulating factors (G-CSFs) reduce the risk of chemotherapy-induced neutropenia. Lipegfilgrastim is a long-acting, once-per-cycle G-CSF not currently reimbursed in Mexico, while the short-acting G-CSF filgrastim is the reimbursed standard of care. This analysis evaluated the cost-effectiveness of lipegfilgrastim compared with filgrastim and pegfilgrastim in managing adult patients at risk of neutropenia from the perspective of the healthcare system in Mexico.
Material and Methods: A decision analytic model used inputs based on national data, clinical trial evidence including meta-analysis, and expert opinion to calculate the expected health outcomes and costs associated with each G-CSF regimen over a 30-year time horizon. Costs included direct drug and medical costs, outpatient and inpatient treatments of neutropenia, and adverse events. Health outcomes included life years (LYs) saved and quality-adjusted life years (QALYs) gained. Model outputs were used to estimate incremental cost-effectiveness ratios (ICERs) in terms of the incremental cost per LY saved and incremental cost per QALY gained. Costs and outcomes were discounted annually at a rate of 5%; all costs expressed are in 2015 Mexican pesos (P$). One-way and multi-way probabilistic sensitivity analyses (SA) were conducted.
Results: Base-case results indicated the total cost per patient over a course of four chemotherapy cycles was estimated to be P$60,460 for lipegfilgrastim, P$62,496 for filgrastim, and P$68,193 for pegfilgrastim. The incidence of neutropenia (severe and febrile) and risk of mortality was lower in lipegfilgrastim than in filgrastim and pegfilgrastim. Over a 30-year time horizon, including duration of chemotherapy, total life-time cost per patient was P$193,610 for lipegfilgrastim compared with P$196,672 for filgrastim. Health outcomes per patient were calculated as 12.93 LYs saved and 6.92 QALYs gained for lipegfilgrastim and 12.79 LYs saved and 6.76 QALYs gained for filgrastim. Lipegfilgrastim treatment had an incremental cost savings of P$3,062 and incremental LYs and QALYs of 0.14 and 0.16, respectively. The model was most sensitive to the per-administration cost of filgrastim or lipegfilgrastim; however, in the probabilistic SA, lipegfilgrastim treatment was cost-effective 60% of the time at a willingness-to-pay threshold of P$184,000 per QALY.
Conclusions: Due to reduced incidence of neutropenia, increased LY/QALY, and lower overall cost, lipegfilgrastim was the dominant treatment strategy over short-acting filgrastim and long-acting pegfilgrastim from the perspective of the Mexican healthcare system.
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