PMD72

MODELING THE COST-EFFECTIVENESS OF A NEW COVERED STENT (WILLIS) VS. ENDOVASCULAR COIL OCCLUSION FOR THE TREATMENT OF INTRACRANIAL ANEURYSMS IN CHINA

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OBJECTIVES: To evaluate the cost-effectiveness of a new covered stent (WILLIS) vs. endovascular coil occlusion for the treatment of intracranial aneurysms in China. METHODS: A decision tree model was constructed and the treatment impact was projected up to 6 months. 88 endovascular coil occlusion treated initial intracranial aneurysms patients and 34 recurrence intracranial aneurysms patients were treated with intracranial aneurysm stent (diameter > 7 mm in 100 cases) by the same operator. Data were collected from hospital information system in multi-hospitals in 12 cities in China. Direct medical cost data, including drug cost, medical device cost, and operating room and personnel cost were abstracted from the charts. The aneurysm recurrence rates by WILLIS and Coil treatments were obtained through literature review. The mortality rate of intracranial aneurysms recurrence, and side effects rates of treatments were collected through a direct expert survey. The main summary measure in this evaluation was incremental cost per death avoided. One way sensitivity analysis was performed to determine the robustness of the results. RESULTS: The total direct medical cost was €1,639 and €2,116, respectively, in prostate cancer. EPICUP was dominant versus ResponseDX in all adenocarcinomas. Regarding the comparison with diagnostic standard of care, the ICER was €15,972 for breast cancer; €25,932 for colon cancer; €36,125 per QALY for pancreatic cancer; €41,571 per QALY for NSCLC cancer; €28,881 per QALY for hepatocellular cancer; and €6,771 per QALY for prostate cancer. These results were also robust across deterministic and probabilistic sensitivity analysis. CONCLUSIONS: From the Spanish NHS perspective, EPICUP is a cost-effective or dominant approach in comparison with other standards, including qualifying standard diagnostic methods (in this case when considering WTP threshold ≤50,000), in all carcinoma analyzed, while improving patient care.

PMD73

COST-EFFECTIVENESS OF SCREENING FOR COLORECTAL CANCER IN ARGENTINA

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OBJECTIVES: The study –implemented after requirement of the National Cancer Institute (INC) - shows the results of a cost-effectiveness evaluation based on two alternative (screening and non-screening) scenarios of annual FIT screening with reverse FIT in a population collected every ten years in Argentina. METHODS: The study develops a Markov model in ten stages, based on information provided by the INC, prior literature review and on-line questionnaires to physicians enrolled in the four major scientific societies related to colorectal cancer, in addition to the National Superintendence of Social Health Insurances and a sample of managers in social and private insurance schemes. RESULTS: The estimated model suggests that FIT annually applied becomes the most cost-effective screening method for CRC, in comparison with both no intervention and just colonoscopy. The incremental cost-effectiveness for annual FIT screening is USD 220 - per quality-adjusted life years (QUALY) against no-intervention, and the cost-effectiveness ratio is low and acceptable considering the WHO criteria (per capita GDP), in comparison to the cost-effectiveness ratios of other cardiovascular preventive interventions priced in Argentina. CONCLUSIONS: Results of cost-effectiveness analyses are often strongly associated to disbursements related to specific performance indicators, such as the challenges of implementing such initiatives under budget constraints and/or availability and quality of equipments and human resources. These aspects were considered in the implementation of different scenarios in the sensitivity analysis, which includes adherence to treatments and capacity of accurate diagnoses, providing strength to the output reached in the research.

PMD74

A COST-EFFECTIVE ANALYSIS OF REVOLUTION CT FOR PATIENTS WITH ACUTE CHEST PAIN

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OBJECTIVES: This study was carried out to assess, from the viewpoint of cost-effectiveness, the optimum number of blood cultures for adults patients with infection in China. METHODS: A decision tree was constructed for a cohort of Chinese adults aged 18 and above with LAC who presented with disease at three time points: 24 hours, 48 hours, and 72 hours. RESULTS: The cost per quality-adjusted life year (QALY) gained for the optimal number of blood cultures was €36,125 per QALY for the two-day blood cultures. The detection rate and survival rate of complications were main outcomes and infectious endocarditis, meningitis, septic shock and kidney failure were considered as complications of infection in the model. The cost of bloodstream culture, antibiotic use and complications, the detection rate, incidence and survival rate of complications were collected from literature reviews. Sensitivity analyses were conducted to evaluate the robustness of the model and to identify which model inputs had most impact on the results. RESULTS: The detection rate and the survival rate of complications were calculated as 65 and 97.9% for one-time blood culture, 80 and 98.0% for two-time blood cultures and 96 and 98.2% for three blood cultures, respectively. When using detection rate as outcome and willing to pay is more than RM8500 yuan, two-time blood cultures were cost-effective. The cost of blood culture and the detection rate will affect the results. When using survival rate of complications as outcome, two-time blood cultures was cost-saving and better than one-time blood culture. CONCLUSIONS: This analysis suggests that a 2-time blood culture collection method is recommended for blood culture for patients aged 18 and over with infection from the aspects of cost-effectiveness and diagnostic accuracy in China.

PMD75

COST-EFFECTIVENESS OF A LEFT ATRIAL APPENDAGE CLOSE DEVICE IN PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION UNABLE OR UNWILLING TO TOLERATE ORAL ANTICOAGULANT THERAPY IN ITALY AND SPAIN


OBJECTIVES: Approximately 18-20% of non-valvular atrial fibrillation (NVAF) patients are unable or unwilling to tolerate oral anticoagulant therapy (OAT) leaving them at risk of stroke. Left atrial appendage closure (LAAC) device offers an alternative stroke risk reduction strategy that enables the majority of patients to discontinue long-term systemic OAT. Acknowledging both potential improvements in health outcomes and cost implications of LAAC device, this study considers the lifetime costs and benefits of LAAC compared to aspirin plus clopidogrel (A+C) in high-risk NVAF patients ineligible or unwilling to take OAT. METHODS: A Markov model was constructed to assess the cost-effectiveness of LAAC compared to A+C. Due to the lack of direct clinical trial data an indirect comparison was performed, having common comparator, PRAGUE-3 (mean follow-up: 3.8 years) and ACTIVE-W (1.3 years) trials were used to indirectly compare LAAC against A+C. Clinical results were combined with cost and utility data to assess the relative cost-effectiveness of the device. Furthermore, to reflect the real-world treatment population, baseline characteristics were stratified according to the severity of stroke and bleeding using CHADS2-VASc and HAS-BLED scores. RESULTS: The base-case results demonstrate the LAAC as the cost-effective strategy compared to A+C in both countries with ICERs of €6,116 per life-year gained (LYG) and €9,942 per quality-adjusted life year (QALY) gained for Italy, and €10,298 per LYG and €7,683 per QALY gained for Spain. The ICERs per QALY gained are significantly below the willingness-to-pay thresholds generally accepted by each country: €5,600 in Italy and €5,000 in Spain. With the assumption that the cost of LAAC becomes greater when risk of stroke and bleeding increases. CONCLUSIONS: LAAC device should be prioritised in patients who require an alternative to OAT and at relatively higher risk of stroke or bleeding.

PMD76

AN ECONOMIC ANALYSIS OF THE OPTIMUM NUMBER OF BLOOD CULTURES FOR ADULT PATIENTS WITH INFECTION

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OBJECTIVES: This study was carried out to assess, from the viewpoint of cost-effectiveness, the optimum number of blood cultures for adults patients with infection in China. METHODS: A decision tree was constructed for a cohort of Chinese adults aged 18 and above with infection and simulated the effects of only one-time, two-time and three-time blood cultures. The detection rate and survival rate of complications were main outcomes and infectious endocarditis, meningitis, septic shock and kidney failure were considered as complications of infection in the model. The cost of bloodstream culture, antibiotic use and complications, the detection rate, incidence and survival rate of complications were collected from literature reviews. Sensitivity analyses were conducted to evaluate assumptions of the model and to identify which model inputs had most impact on the results. RESULTS: The detection rate and the survival rate of complications were calculated as 65 and 97.9% for one-time blood culture, 80 and 98.0% for two-time blood cultures and 96 and 98.2% for three blood cultures, respectively. When using detection rate as outcome and willing to pay is more than RM8500 yuan, two-time blood cultures were cost-effective. The cost of blood culture and the detection rate will affect the results. When using survival rate of complications as outcome, two-time blood cultures was cost-saving and better than one-time blood culture. CONCLUSIONS: This analysis suggests that a 2-time blood culture collection method is recommended for blood culture for patients aged 18 and over with infection from the aspects of cost-effectiveness and diagnostic accuracy in China.

PMD77

VALUE OF ANTIDRUG ANTIBODY SCREENING IN MODERATE-TO-SEVERE RHEUMATOID ARTHRITIS PATIENTS WHO FAILED INITIAL TUMOR NECROSIS FACTOR-ALPHA TREATMENT

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OBJECTIVES: The development of antidrug antibody (ADA) causes the failure of initial tumor necrosis factor-alpha blocker (TNF-α blocker) in rheumatoid arthritis (RA) patients, low drug serum levels, and higher disease activity. TNF-α blockers have a high likelihood of failing to 2nd TNF-α blocker. ADA-screening is commonly used as a supportive tool for switching to 2nd TNF-α blocker or non-TNF blockers in Europe but not standard of care in the United States. Moreover, no evidence of value of ADA-screening in RA patients exists. This study estimated incremental effectiveness and cost of