ADDITION OF ZOLEADIC ACID TO ENDOCRINE THERAPY IN PREMENOPAUSAL WOMEN WITH HORMONE-RESPONSIVE EARLY BREAST CANCER CAN BE COST-EFFECTIVE FROM ITALIAN, SPANISH, AND PORTUGUESE HEALTH-CARE PERSPECTIVES, BASED ON THE ABCSG-12 TRIAL

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OBJECTIVES: To retrospectively estimate the cost-effectiveness of adding zoledronic acid (ZOL; 4 mg intravenously q6m) to adjuvant endocrine therapy (ET; goserelin plus tamoxifen or anastrozole) in premenopausal women with endocrine-responsive early breast cancer (ERBC) from Italian, Spanish, and Portuguese health-care perspectives. METHODS: A Markov model projected lifetime outcomes and costs of care for ERBC patients receiving 3 years’ adjuvant ET or adjuvant ET plus ZOL. Cost-effectiveness was measured as the incremental cost per quality-adjusted life-year (QALY) gained. Probabilities of BC recurrence were from the ABCSG-12 trial. Other probabilities and country-specific costs were from published literature. Results were generated under two scenarios: 1) benefits of ZOL persist to the 7-year maximum follow-up (trial benefit); 2) benefits persist until recurrence or death (lifetime benefit). RESULTS: Expected costs and QALYs were discounted at 3% and sensitivity analyses were conducted. Under the trial benefit scenario, savings from reduced BC recurrence partially offset costs by €990 (both Spain and Italy) and €200 (Portugal). Therefore, projected total ZOL costs were €600 (Italy), €1300 (Spain), and €1200 (Portugal). Projected QALY gains with ZOL were 0.46 (Italy), 0.47 (Spain), and 0.33 (Portugal). Costs per QALY gained were €1304 (Italy), €2766 (Spain), and €6364 (Portugal) (all favorable). Under the lifetime benefit scenario, savings from reduced BC recurrences completely offset ZOL costs and yielded net savings of €2900 (Italy) and €2100 (Spain). Incremental total costs were €1400 for Portugal. Projected QALY gains with ZOL were 1.57 (Italy), 1.59 (Spain), and 0.96 (Portugal). The cost per QALY gained for Portugal was highly favorable ($4348). CONCLUSIONS: Adding ZOL to ET in premenopausal women with ERBC can be highly cost-effective (<$50,000 per QALY gained) in Italy, Spain, and Portugal. Additionally, ZOL would be considered cost saving to patients in Italy and Spain if these benefits persist >7 years.

SCREEN COLORECTAL CANCER: FECAL IMMUNOCHEMICAL TEST VS. FECAL DNA; A COST-EFFECTIVENESS STUDY

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OBJECTIVES: This study aims to compare the guaica-based fecal immunochemical test (FIT), the primary colorectal cancer (CRC) detection technique, with the fecal DNA (F-DNA) test which has been recommended as an alternative to FIT as the standard of care. METHODS: A hybrid decision tree–Markov model was created to estimate the CRC screening cost per quality-adjusted life-year (QALYs) of using the FIT annually, or the F-DNA every 3 or 5 years in individuals at average CRC risk from a third-party payer’s perspective. A hypothetical cohort of 100,000 individuals transitioning between the health states: healthy, polyps <10 mm, polyps >10 mm, local cancer, regional cancer, advanced cancer, and dead, were followed until they were 75 years. Colonoscopy followed every positive test result. Sensitivity, specificity, transition probabilities, and costs (in 2010 US dollars) were derived from clinical trials and published peer-reviewed articles. Test costs and QALYs were discounted at 3% and sensitivity analyses were conducted. RESULTS: Using FIT annually would result in an average cost of $356,716.94/QALY for each individual with an incremental cost-effectiveness ratio (ICER) of $76,181/QALY when compared to F-DNA used every 5 years. In the ICER plane of 1000 for each individual with an incremental cost-effectiveness ratio (ICER) of $76,181/QALY gained. Probabilities of BC recurrence were from the ABCSG-12 trial. Other probabilities and country-specific costs were from published literature. Results were generated under two scenarios: 1) benefits of ZOL persist to the 7-year maximum follow-up (trial benefit); 2) benefits persist until recurrence or death (lifetime benefit). RESULTS: Expected costs and QALYs were discounted at 3% and sensitivity analyses were conducted. Under the trial benefit scenario, savings from reduced BC recurrence partially offset costs by €990 (both Spain and Italy) and €200 (Portugal). Therefore, projected total ZOL costs were €600 (Italy), €1300 (Spain), and €1200 (Portugal). Projected QALY gains with ZOL were 0.46 (Italy), 0.47 (Spain), and 0.33 (Portugal). Costs per QALY gained were €1304 (Italy), €2766 (Spain), and €6364 (Portugal) (all favorable). Under the lifetime benefit scenario, savings from reduced BC recurrences completely offset ZOL costs and yielded net savings of €2900 (Italy) and €2100 (Spain). Incremental total costs were €1400 for Portugal. Projected QALY gains with ZOL were 1.57 (Italy), 1.59 (Spain), and 0.96 (Portugal). The cost per QALY gained for Portugal was highly favorable ($4348). CONCLUSIONS: Adding ZOL to ET in premenopausal women with ERBC can be highly cost-effective (<$50,000 per QALY gained) in Italy, Spain, and Portugal. Additionally, ZOL would be considered cost saving to patients in Italy and Spain if these benefits persist >7 years.

COMPARISON OF ADVANCED NONINVASIVE TECHNIQUES TO SCREEN COLORECTAL CANCER: FECAL IMMUNOCHEMICAL TEST VS. FECAL DNA; A COST-EFFECTIVENESS STUDY

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