Abstracts

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THE COST-EFFECTIVENESS OF ABATACEPT VERSUS RITUXIMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS: A PERSPECTIVE OF THE CANADIAN PUBLICLY FUNDED HEALTH CARE SYSTEM

Yuan Y1, Mainer-Moldovan M2, Maclean R3, LItalien GJ4

1Bristol-Myers Squibb, Princeton, NJ, USA, 2Bristol-Myers Squibb, Saint-Laurent, QC, Canada, 3Bristol-Myers Squibb Pharmaceuticals, Lawrenceville, NJ, USA, 4Bristol-Myers Squibb, Wallingford, CT, USA

OBJECTIVE: To estimate the life-time cost-effectiveness of abatacept relative to rituximab in patients with active rheumatoid arthritis (RA) and an inadequate response to DMARD or anti-TNF therapy and also highly cost effective relative to infliximab.

RESULTS: The objective of this study was to access the cost-effectiveness of rituximab (RTX) for the treatment of rheumatoid arthritis (RA) in Taiwan from a payer’s (Bureau of National Health Insurance [BNHI]) perspective. METHODS: A cost-effectiveness model was developed to simulate the long-term clinical outcome and cost impact for a cohort of 10,000 RA patients over the lifetime. The main comparator was current treatment arm, which included etanercept + methotrexate (ETAN + MTX), adalimumab (ADA) + MTX, leflunomide (LEFT) + MTX, and cyclosporine. Relative clinical effectiveness were estimated by an indirect comparison of published ACR response rates adjusting for different study populations and complemented with observational data. Quality adjusted life-years (QALYs) were mapped from a disease severity measure (Health Assessment Questionnaire [HAQ]) score. Average treatment duration for biological agents, LFT + MTX, and CSA were assumed to be 4.25, 4.10, and 1.70 years, respectively. Drug acquisition costs were based on Taiwan’s National Health Insurance fee schedule for 2007. Costs associated with drug adminis-

COST-EFFECTIVENESS OF ABATACEPT IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS (RA) AND INADEQUATE RESPONSE TO METHOTREXATE (MTX) OR TUMOR NECROSIS FACTOR-ALPHA INHIBITORS (ANTI-TNFs): A CANADIAN PERSPECTIVE

Maier-Moldovan M1, Yuan Y2, Maclean R1, LItalien GJ4

1Bristol-Myers Squibb, Saint-Laurent, QC, Canada, 2Bristol Myers Squibb Pharmaceuticals, Lawrenceville, NJ, USA, 3Bristol Myers Squibb, Wallingford, CT, USA

OBJECTIVE: To estimate the life-time cost-effectiveness (CE) of abatacept in patients with active RA and inadequate response to MTX or anti-TNFs. METHODS: We developed a patient-level simulation model to depict progression of functional disability over time. Functional disability was expressed in terms of the Health Assessment Questionnaire Disability Index (HAQ-DI). Health-state utilities and medical-care costs were assumed to depend on HAQ DI scores. The model separately estimated CE using data from three phase III clinical trials: 1) abatacept in patients with inadequate response to MTX (AIM); 2) abatacept in patients with inadequate response to anti-TNFs (ATTAIN); and 3) abatacept or infliximab in patients with inadequate response to MTX (BMS-IM101043). Cost-effectiveness of abatacept was examined in terms of the incremental cost (2006 Canadian dollars) per quality-adjusted life-year (QALY). RESULTS: 1) AIM trial: On a lifetime basis, abatacept was estimated to yield an average of 1.4 additional QALYs per patient vs. MTX at a mean incremental cost of $54,331; the estimated CE of abatacept was $39,604 (95% CI: $38,746, $41,384) per QALY gained; 2) ATTAIN: abatacept yielded an average of 1.2 additional QALY vs. oral DMARDs alone at a mean incremental cost of $50,141; estimated CE of abatacept was $42,021 (95% CI: $40,954, $43,256) per QALY; 3) trial 043: Relative to placebo, abatacept therapy was estimated to yield an average of 1.58 additional QALY at a mean incremental cost of $58,351; incremental CE of infliximab was $43,247 ($40,845, $44,587) per QALY, relative to infliximab, abatacept was about $14,841 per QALY. CONCLUSION: Abatacept is cost-effective in patients with active RA and inadequate response to DMARD or anti-TNF therapy and also highly cost effective relative to infliximab.

COST-EFFECTIVENESS ANALYSIS OF RITUXIMAB FOR RHEUMATOID ARTHRITIS IN TAIWAN

Lou SF1, Chen DY2, Cheng TT3, Huang CM4, Lin HY5, Su CC6, Tsai WC7, Tseng JC8, Wei CC9, Yang L10, Hazard S11, Chang DM12

1Chang Gung Memorial Hospital, Linkou, Taiwan, 2Taichung Veterans General Hospital, Taichung, Taiwan, 3Chang Gung Memorial Hospital, Koushun, Taiwan, 4China Medical University Hospital, Taichung, Taiwan, 5Taipei Veterans General Hospital, Taipei, Taiwan, 6Changhua Christian Hospital, Changhua, Taiwan, 7Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, 8Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan, 9Chung Shan Medical University Hospital, Taichung, Taiwan, 10Roche Products Ltd, Taipei, Taiwan, 11F. Hoffmann-La Roche AG, Basel, Switzerland, 12Tr-service General Hospital, Taipei, Taiwan

OBJECTIVE: The objective of this study was to access the cost-effectiveness of rituximab (RTX) for the treatment of rheumatoid arthritis (RA) in Taiwan from a payer’s perspective. METHODS: A cost-effectiveness model was developed to simulate the long-term clinical outcome and cost impact for a cohort of 10,000 RA patients over the lifetime. The main comparator was current treatment arm, which included etanercept + methotrexate (ETAN + MTX), adalimumab (ADA) + MTX, leflunomide (LEFT) + MTX, and cyclosporine. Relative clinical effectiveness were estimated by an indirect comparison of published ACR response rates adjusting for different study populations and complemented with observational data. Quality adjusted life-years (QALYs) were mapped from a disease severity measure (Health Assessment Questionnaire [HAQ]) score. Average treatment duration for biological agents, LFT + MTX, and CSA were assumed to be 4.25, 4.10, and 1.70 years, respectively. Drug acquisition costs were based on Taiwan’s National Health Insurance fee schedule for 2007. Costs associated with drug adminis-