OBJECTIVE: To compare the incremental cost-utility ratio (ICUR) of latanoprost and travoprost versus timolol in France. METHOD: The probability to develop a visual field defect (VFD) was issued from a double-masked double-dummy, phase III multi-centre clinical trial comparing travoprost 0.004% od, latanoprost 0.005% od and timolol 0.5% bid, using the 2 discriminant functions (stable and progressive patients) published by Stewart, 1993. A Markov model was constructed to reproduce the cost and utility of a patient treated over five years, including the following states: VFD and no VFD. Utility was derived from Brown (2000), based on visual acuity. Direct medical and indirect costs were estimated from a five-year retrospective patient chart analysis. Both costs and outcomes were discounted at a 5% rate. The economic perspective was the one of Society. Sensitivity analysis was performed on the 25th to 75th percentile range of the discriminant empirical distribution function. RESULTS: The ICUR of latanoprost over timolol was €20,327/QALY and €15,374 for travoprost. Results without discounting were similar, €20,150 and €15,196, respectively. At the 25th percentile of the discriminant function, the ICUR were €58,250 and €38,428 respectively and €11,262 and €11,639 at the 75th percentile. At the median of the distribution function, travoprost in comparison to latanoprost brings 0.01 QALY at a €51 additional cost. CONCLUSION: According to our model, travoprost is a cost-effective alternative to timolol. The additional cost to be paid for one QALY in comparison to timolol is lower with travoprost than with latanoprost.

PATIENT REPORTED OUTCOMES AND HEALTH SYSTEM ECONOMIC IMPACT OF A REFORMULATION TO IMPROVE BRIMONIDINE 0.2% PATIENT OUTCOMES
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OBJECTIVE: To improve patient reported outcomes of brimonidine 0.2% ophthalmic solution, a new formulation was researched and developed. The intent was to improve patient satisfaction and patient comfort while maintaining patient efficacy. The economic impact of these improvements was also evaluated. METHODS: Randomized, controlled trials were conducted in 743 patients to evaluate the original formulation vs. the new formulation. The new formulation reduced the concentration of the active ingredient from 0.2% to 0.15% and replaced the preservative, benzalkonium chloride (BAK), with Purite. Patient outcomes were satisfaction and comfort level with the product. The economic evaluation model estimated the annual cost per patient including pharmacy and medical office visits (including those that may occur due to adverse events.) RESULTS: More patients were satisfied with the new formulation (83%) than the original (75%) (p < 0.05). 85% of patients reported the new formulation was comfortable vs. 79% for the original. Approximately 90% of the new formulation patients had no reported ocular allergy vs. 84% of the original formulation patients. Considering the additional costs associated with allergy as an additional office visit, the economic model estimated the cost of an allergy patient was 36% higher than for an allergy free patient. CONCLUSION: Patients receiving the new 0.15% reformulation of brimonidine rated their treatment satisfaction and comfort level higher than patients on the original formulation while experiencing the same level of efficacy. The estimated cost savings for allergy-free patients could have a positive impact on medical budgets.

COST-UTILITY OF VITAMINS FOR THE TREATMENT OF MACULAR DEGENERATION
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OBJECTIVES: High-dose vitamin supplementation (HDVS) has recently been demonstrated to be of benefit for the prevention of progression of age-related macular degeneration (AMD) by the investigators of the Age-Related Eye Disease Study (AREDS), a National Eye Institute-sponsored randomized clinical trial. The aim of our study was to determine the cost-utility of HDVS in patients with the moderately advanced form of “dry” AMD. The analysis was performed from the perspective of a third-party-insurer who was considering adding HDVS to their list of insured benefits. METHODS: Various decision analyses, based on Markov processing, were performed. Our models incorporated published data from the AREDS, our own patient-based utilities (n = 127) and anticipated reductions in the need for treatments and services needed to treat the “wet” form of this disease. In addition, we created a cost-utility model by considering incremental medical costs incurred through the use of HDVS. Various sensitivity analyses were carried out to determine the robustness of our models. RESULTS: Our decision analysis, based on patient-derived utilities, demonstrated that HDVS with both antioxidants and zinc was found to be the preferred method of action, as it was associated with an expected relative gain in utility of 2.9 percent. Monte Carlo simulation demonstrated that the observed difference between treatment and placebo was statistically significant (p = 0.021). Our cost-effective model, which employed a 5% discount rate, demonstrated that the cost per quality-of-life adjusted year (QALY) associated with high dose vitamin supplementation, when applied to patients with the moderately advanced form of dry age-related macular degeneration (group 3 or 4 disease according to the AREDS), was $2,816.63. CONCLUSION: High-dose vitamin supplementation of patients with the moderately advanced form of “dry” age-related macular degenera-
tion can be considered to be a very cost-effective strategy when used to prevent progression of AMD.

**PES 8**

**LOW VISUAL ACUITY AND BLINDNESS SOCIAL COSTS IN FRANCE**

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**Abstracts**

**OBJECTIVES:** To estimate disability pension costs and institutionalisation associated with low visual acuity (LVA) and blindness in France. **METHODS:** Two national surveys performed by INSEE (Institut National de la Statistique et des Etudes Economiques) on disability and institutionalisation in France (1998–1999) were carried out. Information (socio-demographics, disability reasons, disability pension and type of institution) was collected on two national representative samples of living at home and institutionalised populations. Three groups were identified in each case: blind people, LVA people and a control group (non-blind/LVA general population). Linear regression was used to adjust the group pension differences for gender, age and professional categories. The probability of being institutionalised due to blindness/LVA when >55 was estimated with Bayesian rules. **RESULTS:** 15,288 people were included in the survey of institutionalised persons; 279 were blind and 2,536 had LVA. The control group included more women. The blind were younger while those with LVA were older; the blind had fewer jobs. 16,915 people were included in the living at home survey; 86 were blind and 1,080 had LVA. The control group had more women and was younger, while those with LVA had less skilled jobs. Disability pensions varied with gender, age and professional categories. Institutionalised blind people received €112.64 per month more than the control group and €484.33 more than people living at home. Figures for LVA patients were respectively €19.22 and €201.52. Probability of being institutionalised was 6.13% for blind people, 5.91% for LVA and 1.14% for the control group. A person has a 3.4 times greater chance of being institutionalised if blind and 5.2 times with LVA. **CONCLUSION:** Blindness and LVA lead to additional disability pensions payments and institutionalisation. Medical programs aimed at delaying blindness or LVA may have economic consequences outside the direct medical costs that should be taken into account.

**PES 9**

**COST-EFFECTIVENESS AND COST-UTILITY OF OLOPATADINE IN THE TREATMENT OF SEASONAL ALLERGIC CONJUNCTIVITIS (SAC) IN 6 EUROPEAN COUNTRIES**

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**OBJECTIVES:** To assess cost-effectiveness and cost-utility ratios of a new anti-allergic agent Olopatadine in comparison to the reference treatment, Levocabastine, in Seasonal Allergic Conjunctivitis (SAC) in France, Germany, Italy, Spain, Sweden and the United Kingdom. **METHODS:** Data from a randomized, double-blind clinical trial of Olopatadine (O) versus Levocabastine (L) in SAC were used in the analysis. A total of 210 patients were randomized (O:101, L:109). Ocular symptoms and investigator’s Clinical Global Impression (CGI) were reported at baseline and at days 7, 14, 30 and 42. Factorial analysis techniques were used to derive a synthetic symptoms score (effectiveness score) from multidimensional symptom scales. In order to transform symptoms scores into utility scores, a panel of 32 ophthalmologists was interviewed in the 6 European countries to collect data on the painfulness of various symptomatic statuses. Curves representing the evolution of effectiveness and utility scores over time were projected from 42 to 90 days, assuming 3 types of treatment effects after day 42, namely, a maintained effect (H1), a catch-up on comparator (H2) and no additional effect (H3). Areas under effectiveness and utility curves (AUCs) were computed in both arms. Olopatadine-Levocabastine differentials were respectively represented in the effectiveness criterion as the number of Symptoms Adjusted Days saved, (SAD) and in the utility criterion as the number of Quality Adjusted Days saved, (QAD). **RESULTS:** Olopatadine showed a gain from 1.3 (H3) to 2.3 (H1) SADs, and from 0.8 (H3, UK) to 4.2 (H1, Germany) QADs, over 3 months. Assuming a 20% higher price for Olopatadine compared to Levocabastine, the incremental cost-effectiveness ratios of Olopatadine ranged from €1.27 (H1, France) to €21.3 (H3, Italy) per QAD saved, while incremental cost-utility ratio ranged from €1.06 to €23.4 per QAD saved. **CONCLUSION:** Olopatadine showed reasonable cost-effectiveness and cost-utility ratios versus Levocabastine in the treatment of SAC for 6 European countries.

**PES 10**

**PHARMACOECONOMIC EVALUATION OF A NEW TWO COMPOUND OINTMENT (DAIVOBET® AND CALCIPOTRIOL (DAIVONEX®) IN THE TREATMENT OF PSORIASIS VULGARIS IN SWEDEN**

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**OBJECTIVES:** The objective of the study is to investigate the cost-effectiveness of treating patients with psoriasis vulgaris in Sweden. **METHODS:** The cost-effectiveness analysis was performed by comparing effectiveness data obtained from an international multicentre study with the cost of the two products. **RESULTS:** The expected cost per percentage reduction in PASI in Sweden is SEK 15.78 for TCP twice daily, followed by SEK 8.98 for calcipotriol, and TCP once daily SEK 8.29 when comparing