OBJECTIVE: To quantify the effect of treatment duration on life-long societal net value of glaucoma treatment according to its treatment line in three European countries. **METHODS:** A Markov model was used to reproduce the average discounted (5%) cost and outcome of glaucoma treatment over 30 years. Clinical states were first to fourth line treatment, no treatment, laser, surgery, blindness and death. All patients started first line, went successively to the next line after failure. After each failure (and always after the fourth line) patients could have either laser or surgery followed by no treatment, or a new first line treatment. Transition probabilities and resource utilisation (RU) came from of a cross-sectional study with 5 years retrospective data collection for the glaucoma treatment, and from national statistics in France. Expert interviews were conducted in Germany and the Netherlands to collect RU. In-patient and outpatient direct medical costs and indirect costs were estimated from a societal point of view. Sensitivity analyses and second order Monte-Carlo simulation were performed. **RESULTS:** Life expectancy of this cohort (57 years old on average, 52% females) was 23.2 years. Patients spent 9.8 years in first line, 4.2 in second, 3.0 in third, 2.2 in fourth, 3.6 without treatment, had 0.35 lasers and 1.17 surgeries. These figures became, respectively, 11.77, 3.36, 2.41, 1.86, 3.47, 0.36 and 1.054 if first line treatment duration increased by 30% and 9.35, 5.52, 2.55, 1.97, 3.46, 0.35, 1.079 for a 30% 2nd line duration increased. In France, €430 and €108 were saved for a 30% first and second line increased, respectively. These figures were €241 and €30 in Germany and €257 and €55 in the Netherlands. Patients spent less time in long-term institution. **CONCLUSION:** Increasing first line or second line glaucoma treatment duration is a cost saving approach over life of a patient according to our model.

PAE13

COST-EFFECTIVENESS ANALYSIS OF TIMOLOL LATANOPROST AND TRAVOPROST IN 3 EUROPEAN COUNTRIES: THE UK, GERMANY AND FRANCE

Lilliu H[1], Ligier M[1], Le Pen C[1], Berdeaux G[2]
[1]Clp-santé, Paris, France; [2]Alcon, Rueil-Malmaison, France

OBJECTIVE: To compare model estimates of the cost-effectiveness of latanoprost and travoprost versus timolol. **METHODS:** The probability of developing a visual field defect (VFD) was estimated using data 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, and the 2 discriminant functions published by Stewart (1993). A Markov model was constructed to estimate the cost and effectiveness (time to disease progression) of patients treated over five years for two states: those who do and those who do not develop a VFD. Resource utilisation was estimated from a 5-year retrospective patient chart analysis in France, from the UK General Practitioner Data Base in the UK, and from expert interviews in Germany. Both costs and outcomes were discounted at a 5% rate. The economic perspective was that of the Heath Care Sick Fund. **RESULTS:** The average time to disease progression was estimated to be 2.81 years with timolol, 3.28 with latanoprost and 3.42 with travoprost. In France, over 5 years, a latanoprost treated-patient is predicted to cost 277.6 more than a timolol-treated patient while the figure for a travoprost-treated patient is EUR 403.7. In Germany, these figures were €858.60 and €714.80, for latanoprost and travoprost respectively. The corresponding amounts in the UK were €288.9 and €251.1. In the UK and in Germany, travoprost was predicted to be more effective and less costly than latanoprost. Comparing the prostaglandin analogues in France, travoprost's incremental additional 5 year cost is modelled to be €951.4 per additional disease free year. **CONCLUSION:** According to our model, travoprost is a cost-effective alternative to timolol and latanoprost.

PAE14

COST-EFFECTIVENESS ANALYSIS OF PMMA, SILICONE, AND ACRYLIC INTRA-OCULAR LENSES IN CATARACT THERAPY IN FOUR EUROPEAN COUNTRIES

Smith AF[1], Lafuma A[2], Berto P[3], Magaz S[4], Berdeaux G[5], Auffarth G[6], Brézin A[7], Caporossi A[8], Mendicute J[9], Brueggenjuergen B[10]
[1]Alcon Laboratories Ltd and Nuffield Laboratory of Ophthalmology, University of Oxford, Hemel Hempstead, Hertfordshire, United Kingdom; [2]CEMKA, Bourg la Reine, France; [3]PBE Consulting, Verona, Italy; [4]Health Outcomes Policy and Economics, Barcelona, Spain; [5]Alcon, Rueil-Malmaison, France; [6]Ruprecht-Karls-Universitat, Heidelberg, Heidelberg, Germany; [7]Hopital Cochin, Paris, France; [8]Universita di Siena, Sienna, Sienna, Italy; [9]Hospital Donostia, Donostia San Sebastain, San Sebastain, Spain; [10]Alphacare, Celle, Germany

OBJECTIVE: The aim of this study was to compare the cost-effectiveness of intraocular lens material (PMMA, silicone, acrylic hydrophilic, and hydrophobic) implanted during cataract surgery with reference to Yag-laser capsulotomy and Yag-laser complications in four European countries (France, Italy, Germany and Spain). Setting: A retrospective review of 1525 patients (eyes), aged 50 to 80 years, operated with phaco-emulsification for cataract in 1996 or 1997 in 16 surgical centres (4 per country). **METHODS:** The study was conducted using a cost-effectiveness approach. Medical charts were reviewed to collect retrospective information during the 3-year period following cataract surgery in order to identify patients who underwent YAG laser capsulotomy post-operatively. Clinical data were combined with unit costs assessed by experts for Yag laser capsulotomy and Yag complications. A cost-effectiveness ratio (cost per patient without Yag laser capsultomy intervention) was estimated in relation