OBJECTIVES: Retinitis Pigmentosa (RP) is a hereditary genetic disease causing bilateral retinal degeneration with a leading cause of retinal transplant versus usual care resulting in increased impairment and drastic reduction in the Quality of life of the patients. Although the condition is at present incurable, advances in the field of retinal implants demonstrate the progress now being made in combating the condition and restoring a measure of sight. The objective of this study was to assess the cost-effectiveness of first-ever-commercial implant intended to restore some vision in the Retinitis Pigmentosa (RP) patients.

METHODS: A multi -state transition Markov model was developed to determine the lifetime cost and outcomes of retinal transplant versus usual care in RP from the perspective of health care payer. A hypothetical cohort of 1000 RP patients aged 46 years followed up over a (lifetime) 25-year time horizon. Health outcomes were expressed as quality adjusted life years (QALYs) and direct health care costs were included in 2012 US$. Results are reported as incremental cost per QALYs (ICERs) with outcomes and costs discounted at an annual rate of 3.5%.

RESULTS: The ICER for the retinal implant was $14,603/QALY. Taking into account the uncertainty in model inputs, the ICER for the cost-effectiveness ratio (CER) in the base-case analysis (ICER $14,603/QALY) was driven by an assumption of no reduction of cost across model visual acuity states or a model time horizon as short as 10 years the ICER increased to $31,890/QALY and $49,769/QALY respectively. CONCLUSIONS: This economic evaluation shows that the retinal implant falls below the published societal willingness to pay of $30,000 in the UK. Retinal implants could eventually change the lives of up to 200,000 people worldwide who suffer from blindness due to Retinitis Pigmentosa.

PSS20
COST-EFFECTIVENESS OF RANIBIUMAB VERSUS LASER IN THE TREATMENT OF VISUAL IMPAIRMENT DUE TO DIABETIC MACULAR ODEMA (DME) FROM THE COLOMBIAN HEALTH CARE SYSTEM PERSPECTIVE

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OBJECTIVES: To evaluate the cost-effectiveness of the Colombian health care system perspective of ranibizumab monotherapy or ranibizumab combined with laser against laser monotherapy for the treatment of diabetic macular edema (DME).

METHODS: A Markov model was designed to simulate the clinical and economic benefits associated with ranibizumab as either monotherapy or combined with laser against laser monotherapy for the treatment of DME. The effectiveness outcomes measured were the life years without visual impairment based on RESTORE 3-year follow-up data. Over 15-year time horizon annual cycles were performed. The costs involved in the model were taken from the official medication cost database in Colombia (SISMED) and 6 Colombian health care providers (IPS) The analysis, according to the RESTORE study, considered that 22% of patients receive treatment on both eyes. For ranibizumab and laser group, the average numbers of years transitioning to the outcome of interest from the same study and for the laser group the second and third year data was taken from the Diabetic Retinopathy Clinical Research Network (DRiCNet.net).

RESULTS: Ranibizumab monotherapy and laser showed a gain of 0.36 QALYs. Cost per QALY was $52,792/QALY relative to laser monotherapy, resulting in an incremental cost- effectiveness ratio (ICER) of COP 28,041,494 ($USD 14,484,77). Combination therapy with ranibizumab monotherapy and laser resulted in a combination therapy with an ICER of COP 34,224,675 ($USD 17,678,6) in a 7 time horizon. Probabilistic sensitivity analysis placed ranibizumab monotherapy as a more cost-effective alternative versus laser monotherapy in 95% of the cases. CONCLUSIONS: The results pointed out that ranibizumab had benefits in terms of increased vision over laser therapy cost-effective alternatives from the Colombian health care system perspective.

PSS21
USING A CROSSOVER STUDY DESIGN FOR EARLY HOSPITAL-BASED HEALTH TECHNOLOGY ASSESSMENT: THE COST-EFFECTIVENESS OF CLINIC-BASED CHLORAL HYDRATE SEDATION VERSUS GENERAL ANAESTHESIA FOR PAEDIATRIC OPHTHALMOLOGICAL PROCEDURES

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OBJECTIVES: Hospitals are a favorable environment for early health technology assessment (HTA) and cross-over designs are ideally suited for this. For example, young children who cannot tolerate eye examinations may require examination under anesthesia (EUA) in an operating room. Examination under chloral hydrate sedation (EUS) in an outpatient clinic may be a convenient and cost-effective alternative. The objective was to determine the incremental cost of EUS compared to EUA for children aged 2-6 years undergoing direct ophthalmoscopy for a suspicious lesion.

METHODS: A cost-effectiveness analysis was conducted using a retrospective cross-over cohort of 80 children that had both EUS and EUA. Direct costs included hospitalization, anesthetic, i.v. sedation and additional medications. Indirect costs included parent productivity losses. Outcomes included the number of successful procedures and adverse events (AEs). One-way and probabilistic sensitivity analyses were conducted. RESULTS: The mean cost per patient was $406 (95% CI $401, $411) for EUS and $1,135 (95% CI $1,125, $1,145) for EUA. The mean number of successful procedures per patient was 1.39 (95% CI 1.3, 1.42) for EUS and 2.06 (95% CI 2.02, 2.11) for EUA. EUS was $729 less costly on average than EUA but resulted in 0.68 fewer successful procedures per child. Three AEs occurred in 2 EUS patients compared to 1 in the EUA group. The result was robust to varying A286 VALUE IN HEALTH 17 (2014) A1-A295