

Effect of patient's life expectancy on the cost-effectiveness of treatment for ocular hypertension

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OBJECTIVE: To assess the influence of expected life span on the cost-effectiveness of treating ocular hypertension to prevent primary open-angle glaucoma.

METHODS: We used a Markov simulation model to estimate the cost and benefit of ocular hypertension treatment over a person's remaining life. We examined the influence of age on the cost-effectiveness decision in 2 ways: (1) by evaluating specific age cohorts to assess the influence of age at the initiation of treatment; and (2) by evaluating the influence of a specific life span.

RESULTS: At a willingness to pay \$50,000/quality-adjusted life year to \$100,000/quality-adjusted life year, treatment of people with a 2% or greater annual risk of developing glaucoma was cost-effective for people aged 45 years with a life expectancy of at least 18 remaining years. However, to be cost-effective, a person aged 55 years must have a life expectancy of 21 remaining years and someone aged 65 years must have a life expectancy of 23 remaining years.

CONCLUSIONS: A person with ocular hypertension must have a life expectancy of at least 18 remaining years to justify treatment at a threshold of a 2% or greater annual risk of developing glaucoma. Persons at higher levels of risk require a life expectancy of 7 to 10 additional years to justify treatment.

<http://www.ncbi.nlm.nih.gov/pubmed/20457984>