

Incorporating a Holistic Patient Perspective When Assessing the Value of NSCLC Therapies

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Introduction

- Conventional sources of value in non-small lung cancer (NSCLC) are based on clinical benefit, including overall survival (OS), time to progression (or progression-free survival), objective tumor response rates, and reduction in tumor-related symptoms^{1,2}
- Patients value elements beyond those traditionally considered by conventional assessments of new technologies for lung cancer, including impact on daily life and impact on family and caregivers³
- Current approaches may undervalue treatments that could improve patient and caregiver wellbeing, as well as have wider societal impact and indirectly influence investment and innovation decisions³
- This could have relevant impact on access and availability of innovative treatment options for patients with NSCLC
- There is a need to continue building recognition and awareness among policymakers that other sources of value for patients, caregivers, and society could complement clinical considerations

Objective

- We sought to identify patient- or caregiver-relevant value elements to support incorporation of broader value sources alongside clinical considerations for NSCLC treatments

Methods

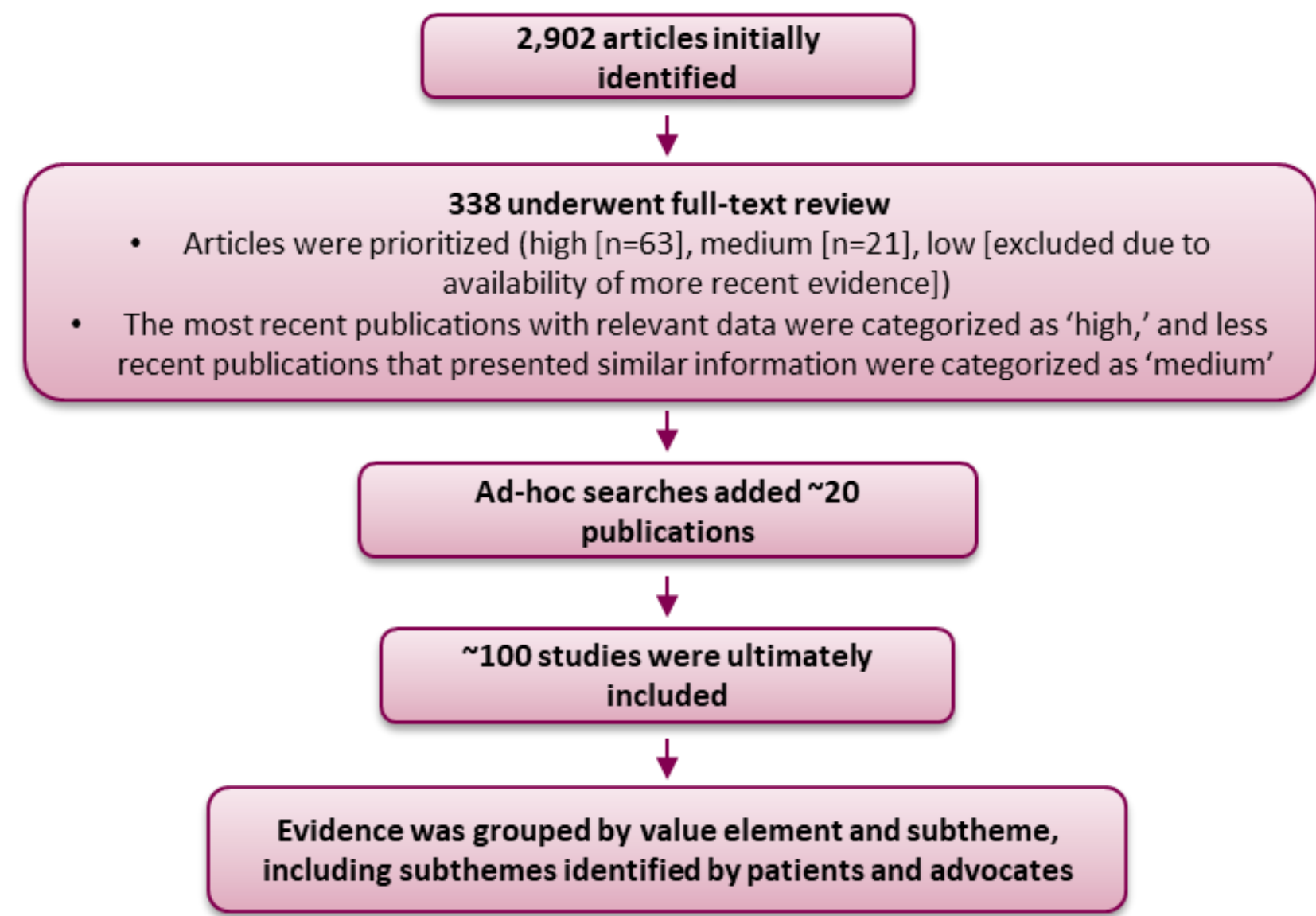
- We searched Ovid for patient- and society-relevant outcomes in adults with NSCLC (i.e., non-interventional studies) applying a predefined algorithm supplemented by international medical and advocacy organizations’ websites (Table 1)
- Relevant studies (utilizing a prespecified topic list) were used to construct value themes and subcategories that were further explored in structured interviews and focus groups with:
 - Five patients with advanced EGFRm NSCLC and patient advocates (from Canada, Germany, and United States), identified by the AstraZeneca Patient Affairs team
 - Clinical and public health experts and a health economist (N=3)
- Ad-hoc literature searches explored additional value elements and subcategories that arose during the interviews and focus groups

Table 1: Search Terms

Search Terms
Productivity loss, indirect costs/burden
Sick pay/early pension costs/burden
Formal and informal care costs (e.g., caregiver or patient time) / burden
Value of hope, value of remission or care
Externalities, qualitative benefits/value
Family burden of cancer patients
Family/carers – depression, exhaustion, helplessness
HCP burden/helplessness
Societal values in paying for cancer care sustainability
Relative burden vs other cancers

Results

Figure 1: Literature Search Overview



- Based on reviewing ~100 articles identified in the literature and discussions with patients, patient advocates, clinical and public health experts, and health economists, we identified several additional value sources beyond clinical trial outcomes (Figure 2).
- Hope & Patient Wellbeing:**
- Patients with lung cancer value improvements to their wellbeing⁴
 - 1/3 patients with stage IIIB/IV NSCLC experience depression and anxiety due to relapse risk^{5,6}
 - Patients with NSCLC who had depression had a median OS of 6.8 months, versus 14 months among those without depression⁵
 - Increasing levels of hope in patients with lung cancer are associated with less pain, fatigue, coughing, and depression^{7,8}
 - Hope is associated with improved measures of health-related quality of life (QoL), lower levels of depression, and is a key source of mental wellbeing in cancer patients with poor prognosis^{7,9}

Patient Economic Burden:

- Although more patients are able to maintain social and professional activities during or after treatment, many report lower work ability compared to pre-diagnosis due to:¹⁰
 - Pain, fatigue, physical weakness, other physical symptoms
 - Sadness, poor concentration, psychological hurdles
 - Side effects from medications

Family/Caregiver Spillovers:

- Caregivers face significant burdens in providing for patients with lung cancer, including impacts to their employment, indirect costs, social impacts and isolation, increased psychological impairment and reduced QoL^{11,12}

Equity in Access to Diagnostics, Experts, and Treatments:

- Patients are often concerned about equitable access to both treatments and qualified providers.¹³ A patient’s location, even within a single country, can present a multitude of challenges

Scientific Spillover (Patient Engagement in Research):

- Patients may be motivated to participate in research that, beyond potential benefits to themselves, may also provide meaningful benefit to future patients¹³

Figure 2: Additional Sources of Value to Patients

Hope & Patient Wellbeing	Value of hope; impacts on mental health and emotional wellbeing	Limit the fear of symptoms, progression, and metastasis	Enable family planning	Increase trust in research	Limit distress relating to stigma, access to treatment, treatment burden, and adherence challenges	Reduce guilt
Patient/Societal Economic Burden	Impacts on patients’ employment and financial status; societal costs and productivity lost due to premature deaths and disability	Maintain ability to work and achieve career opportunities	Minimize direct and indirect financial burden	Maintain productivity	Increase expected lifespan	
Family/ Caregiver Spillovers	Physical, mental, and emotional effects on patients’ family and caregivers	Maintain caregiver employment, QoL, social supports, and finances	Minimize burden on family	Maintain independence		
Equity	Equity in access to diagnostic testing, healthcare experts, and treatment options	Improve access to diagnosis & treatment	Enable early access to new treatment			
Scientific spillover	Innovations and scientific advances that may contribute to future progress in lung cancer diagnosis and treatment	Stimulate innovation	Patients and caregivers drive progress in treatment innovation			

Discussion

- People with NSCLC value hope and wellbeing, economic considerations, caregiver impact, equity, and patient-driven research
- These aspects might not be fully considered in health technology assessments (HTAs), though there is a growing recognition of their importance
- Although some payers are willing to consider the inclusion of productivity losses and out-of-pocket non-medical costs such as travel expenses, the impact on mental wellbeing because of changes in employment status, financial burden and/or deteriorated job satisfaction and career prospects are unlikely to be captured by QoL measures such as the EQ-5D^{14,15}
- At present, the burden experienced by caregivers is not included consistently in cost effective analyses. These are quantifiable inputs that could have meaningful implications for current value frameworks
- While some of these patient value categories might not be fully captured by some HTA agencies, harmonizing patient and caregiver values with conventional value assessment measures (e.g., clinical benefit, cost) could benefit patients, caregivers, society, and healthcare systems

Conclusions

- Beyond the conventional clinical benefits, we have identified that patient hope and wellbeing, economic burden, caregiver burden, equity, service and sustainability, and patient-driven research are also important sources of value for people living with lung cancer⁴
- A key goal of healthcare technology assessments is to develop a system of valuing medical therapies that centers the patient experience when considering the benefits and costs of a therapy. However, the impact on patients and caregivers is often not fully accounted for, and policymakers may be better equipped to improve outcomes when patients and caregivers are more integrated in the approach to decision making
- Ensuring patients have formal representation during the HTA process is one way to help make sure these sources of value to patients are recognized

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Acknowledgements

The authors would like to thank the patients and advocates who contributed to this research.