Interventions to drive quality improvement in Surgical, Medical and Radiation Oncology: An international systematic review

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Introduction

Quality assessment and assurance projects across Europe have highlighted **significant national and international variati**on in cancer patient care and outcomes.

Quality improvement (QI) interventions have the potential to address these **disparities** but there is limited understanding of the interventions developed to support QI in this field.

Objectives

1. To assess the **types, scale, setting and quality** of QI interventions in surgical, medical and radiation oncology
2. To identify whether these interventions had an **impact** on clinical **outcomes**

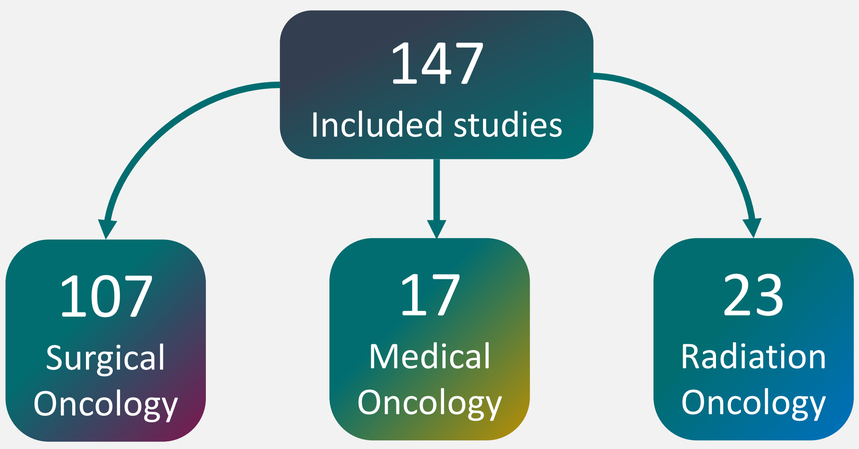
Methods

A systematic search of MEDLINE and EMBASE was conducted to identify studies on **QI interventions** within surgical, medical and radiation oncology published between January 2000 and January 2024.

Studies reporting the impact of the QI intervention on clinical outcomes or care process measures were selected. Results were summarised using narrative synthesis and appraised using the Quality Improvement Minimum Quality Criteria Set (QI-MQCS).

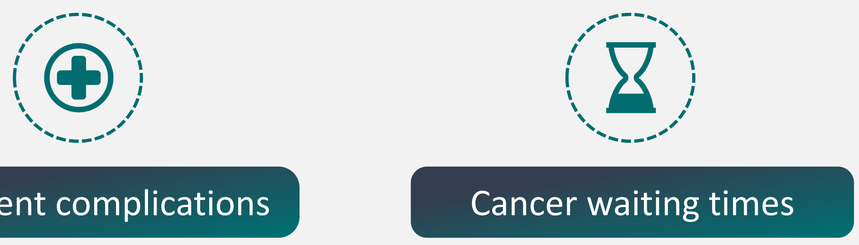
Results

Out of **25,680 papers** identified, 147 were included in the analysis, comprising 107 in surgical oncology, 17 in medical oncology, and 23 in radiation oncology.



- 70 studies were conducted in the **USA** and there were 40 in Europe, primarily in the UK and the Netherlands.
- Only eight studies were conducted **nationally** and 80% of the studies were performed in a **single hospital**.

The most commonly identified care quality deficits were related to:



- The QI interventions in all medical and radiation oncology studies resulted in improved clinical outcomes, while 90 out of 107 studies in surgical oncology showed improvement.
- **Funding** sources were reported in **only 46%** of the studies, with 87% of these studies receiving public sector (national government level) support.
- A total of 78 surgical oncology papers were classified as **low quality** due to the design of the studies which were predominantly uncontrolled pre and post intervention studies.

Conclusions

Despite the huge investment in cancer research and development, there is **very little evidence** on how to **improve the quality of cancer care**, particularly in medical oncology.

Europe has a number of quality assurance programs, but provides **limited investment** in improvement research, with most studies being undertaken in the USA.

The limited funding available contributes to the **lack of high quality** studies which affects their potential to be used to improve the quality of care more widely.

This highlights the need for more comprehensive, well-funded studies, **training and investment** in QI research and better **education** on the substantial gains in improving existing cancer care, considering access and outcomes, rather than a sole focus on acquiring innovation.

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