



# The Pharmacist's Role in Combating Polypharmacy: A Focus on Geriatric Oncology

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## Background/Introduction

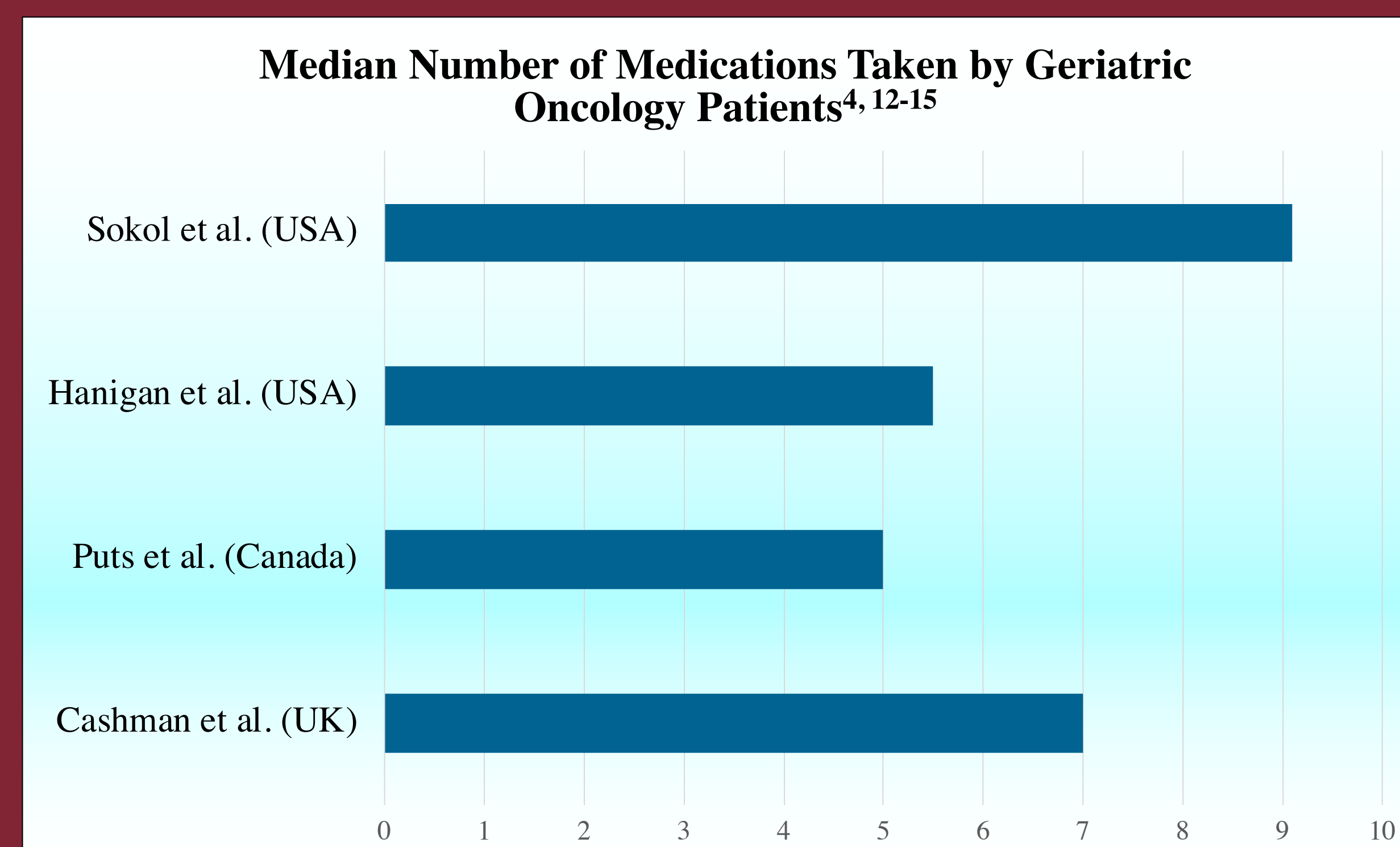
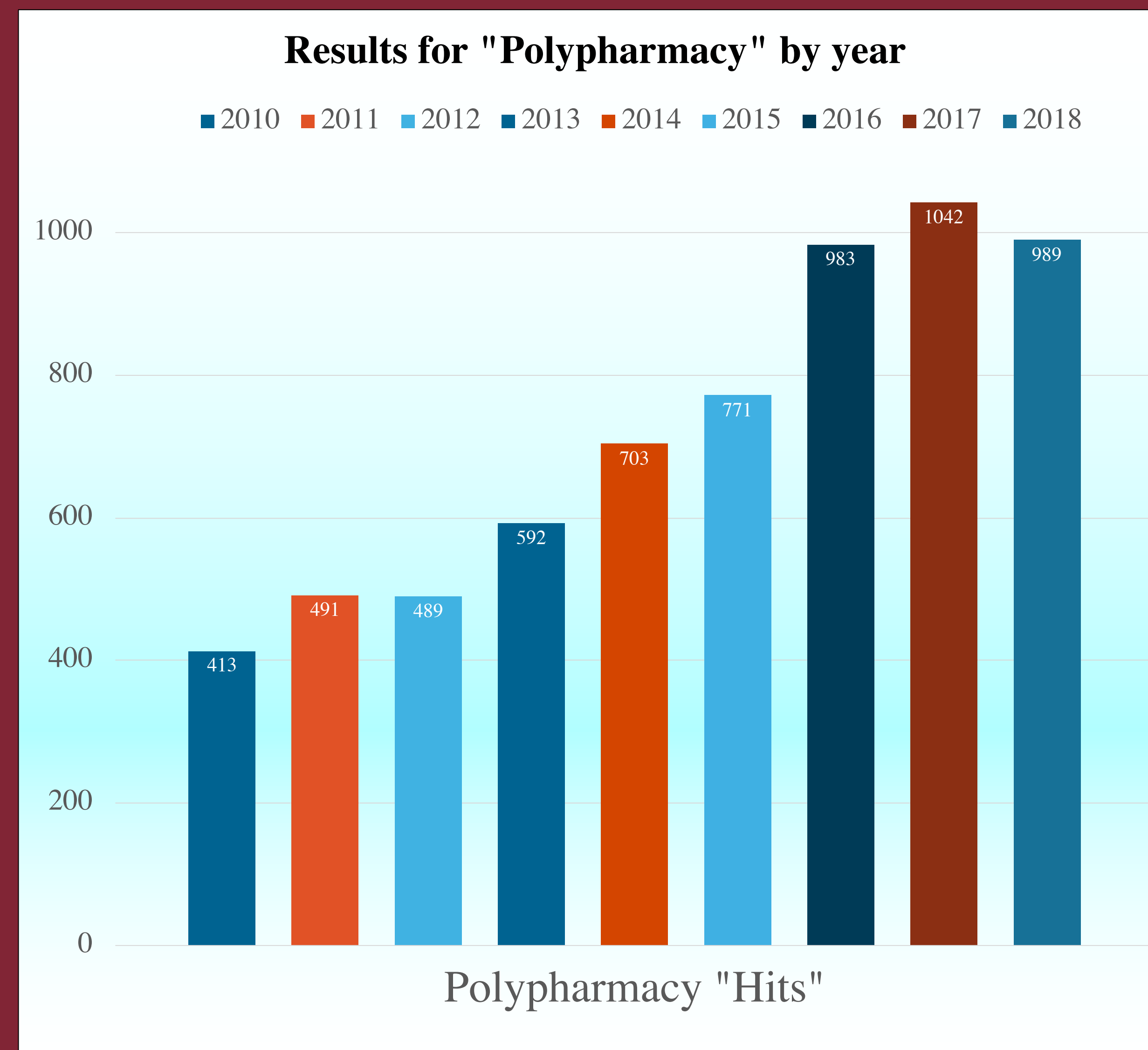
- *What is Polypharmacy?*
  - There are 24 different definitions of polypharmacy in use, dealing with both potentially inappropriate medications (PIMs) as well as an excessive number of medications<sup>1</sup>
  - Conventional definitions of polypharmacy deal solely with the number of medications used; **The use of 5 or more medications regularly is one of the most common definitions of polypharmacy<sup>2</sup>**
- *How common is polypharmacy/use of potentially inappropriate medications (Poly/PIM)?*
  - In the U.S. in 2011-2012, **90% of adults 65 and older** reported taking at least one prescription in the prior 30 days, and **39% reported using 5 or more prescription drugs<sup>2</sup>**
  - In elderly patients with cancer, **11% to 96% were exposed to polypharmacy<sup>2</sup>**
- *What factors contribute to Poly/PIM?<sup>2</sup>*
  - Chronic disease states (i.e. diabetes mellitus)
  - Multimorbidity (having multiple chronic conditions)
  - End-of-life situations, managing symptoms with additional medications
  - Use of complementary and alternative medicine methods
  - Being elderly
  - **Cancer care (complex medication regimens with supportive care medicines)**
- *What outcomes are associated with Poly/PIM?<sup>3,6</sup>*
  - Hospital admissions
  - Drug-drug interactions
  - Adverse drug effects
  - Increased healthcare costs
  - Increased length of stay
  - Delirium
  - **Chemotherapy-related toxicities**
  - Post-operative complications
  - Falls, disability, and frailty

## Objectives

- To summarize the associated negative outcomes of polypharmacy and potentially inappropriate medications (PIMs) in the geriatric oncology population
- To discuss useful and impactful pharmacist-lead interventions to prevent harm resulting from polypharmacy and PIMs

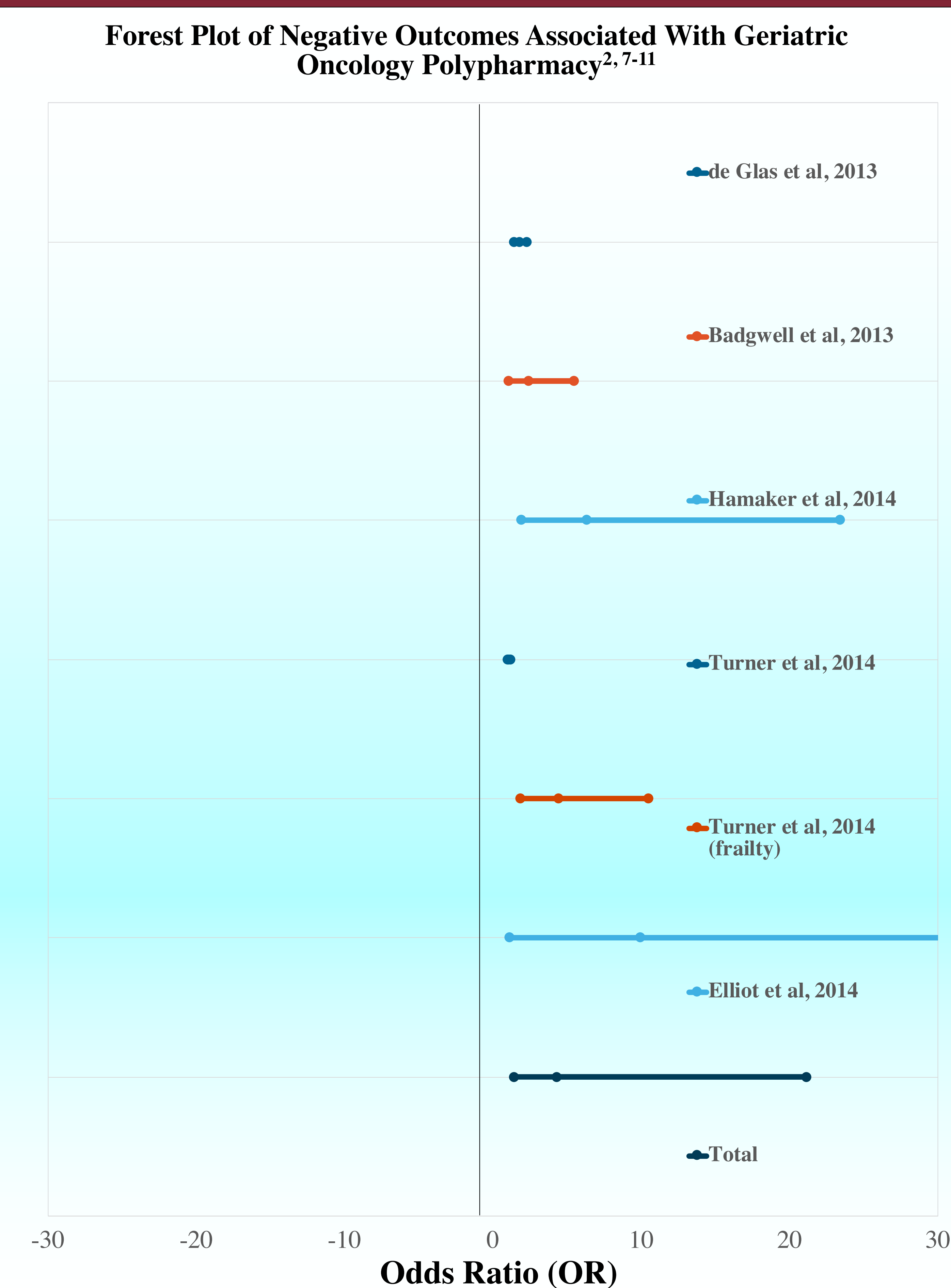
## Methods

- A review of the literature was conducted using the Pubmed electronic database
- Search criteria included: articles published in the English language between the years of 2005-2019; using combinations of the words “Geriatric,” “Oncology,” “Polypharmacy,” and “Potentially inappropriate medications”
- Articles were individually screened twice for relevance via abstract review. Articles that did not meet relevancy were excluded.
- The most common themes, definitions, and ideas found throughout the relevant literature were included and summarized in this review.



## Study Design

- This is a meta-analysis that builds on previous systematic reviews, such as *Sharma et al (2017)*, and further synthesizes data into meaningful tables for analysis, supporting the position that pharmacists are best equipped to intervene and combat polypharmacy
- A literature search was conducted using the Pubmed electronic database, with criteria as defined in the *Methods* section



## Discussion

- Polypharmacy is an increasing concern as patients grow older and live longer. Elderly patients with multiple chronic conditions are at an increased risk for Poly/PIM.
- Medication regimens are becoming increasingly complex, especially in conditions that require many supportive care medications (i.e. cancer)
- **Methods for pharmacists to combat polypharmacy:**
  - Geriatric Assessment (GA)
  - Rational deprescribing
- **Tools to aid in the process:**
  - EHRs
  - Beer's list criteria
  - Screening Tool for Older People's Prescriptions (STOPP)
  - Medication Appropriateness Index (MAI) tool

## Conclusion

- Poly/PIM are issues plaguing the care of elderly patients, especially those with cancer. The negative outcomes associated with poly/PIM are well elucidated.
- Pharmacists are uniquely positioned to hone in on Poly/PIM issues. Pharmacists can effectively and efficiently optimize medication regimens due to extensive pharmacotherapeutic training and education
- Opportunities exist for such optimization and review, such as MTMs, CMRs, in LTC facilities, in the community, ambulatory care settings, and at transitions of care (ex. discharge/transfer)

## References

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