

# Necessity and Influencing Factors for Integrating Oral Health in Cancer Care for Older People

Shalya Anand<sup>1</sup>, Anita Visser<sup>2</sup>, Joel B Epstein<sup>3</sup>, Djenana Jalovcic<sup>4</sup>

<sup>1</sup>Max Planck Institute for Human Development, Berlin, Germany; <sup>2</sup>Department of Gerodontology, Radboud University, The Netherlands; <sup>3</sup>City of Hope National Cancer Centre, Dental Oncology Services, Duarte, CA USA; <sup>4</sup>Western Norway University of Applied Sciences, Bergen, Norway

## Introduction

The number of **older people with poor oral health diagnosed with cancer** is increasing rapidly. However, integration of oral health in cancer care for older people to prevent or minimize oral health complications of cancer treatments is uncommon, except in head and neck oncology. The aim of this narrative review is to **describe the need, role of and factors** influencing the integration of **oral health(care) into cancer treatment in older people**.

## Methods

MEDLINE, CINAHL, PubMed, Scopus, and Web of Science databases were searched for papers published the last 10 years that focus on oral health in older people diagnosed with cancer, impact of oral health on cancer therapy and integrated oral health in cancer treatment. A three-step framework of literature search and screening, data extraction, and analysis was performed. **From 523 related papers, 68 relevant publications were included and summarized.**

## Conclusion

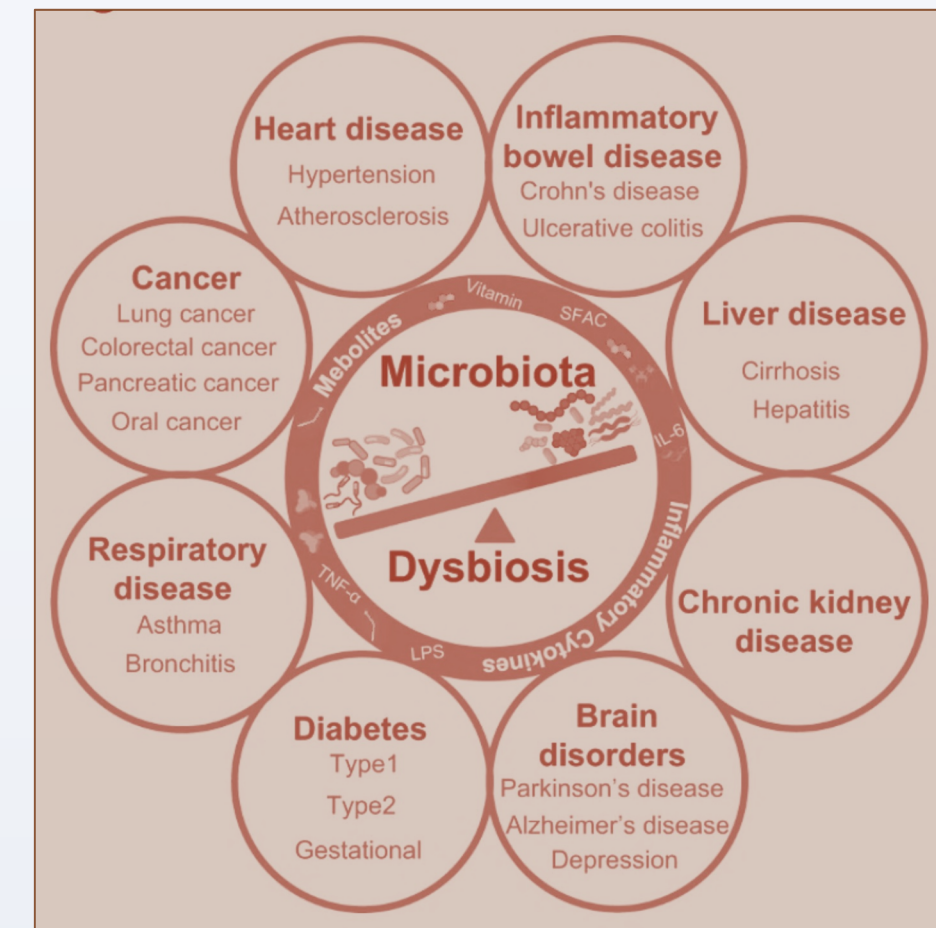
Oral health is necessary to maintain **functional and social capabilities** for the **overall well-being and health** (Fig:1).

Older patients are more vulnerable to adverse effects of cancer therapies (Fig. 2,3).

Oral complications from cancer therapies are inevitable but **timely screening, prevention and treatment** can help improve the journey. Managing oral complications is critical for basic oral functions such as **eating, chewing, speaking, swallowing**. Focus on oral health **before, during and after** cancer therapy is essential for general health and oral function to prevent pain, malnutrition, compliance with therapy. There is a need for **multidisciplinary collaborations** in cancer teams for older patients for improved outcomes (Fig 3,5).

## Identified Research Gap

**Limited Research On Integrating Oral Healthcare In Cancer Care for Older People necessitating further research.**



**Fig. 1: Importance Of Oral-systemic Connection As Human Microbiota Dysbiosis Contributes To Various Diseases**

Older adults comprise:  
\*13.4million new cancer cases  
\*280 million suffer from oral diseases

\*Pre-existing oral diseases, risk factors and habits,  
\*Functional and Financial Dependency

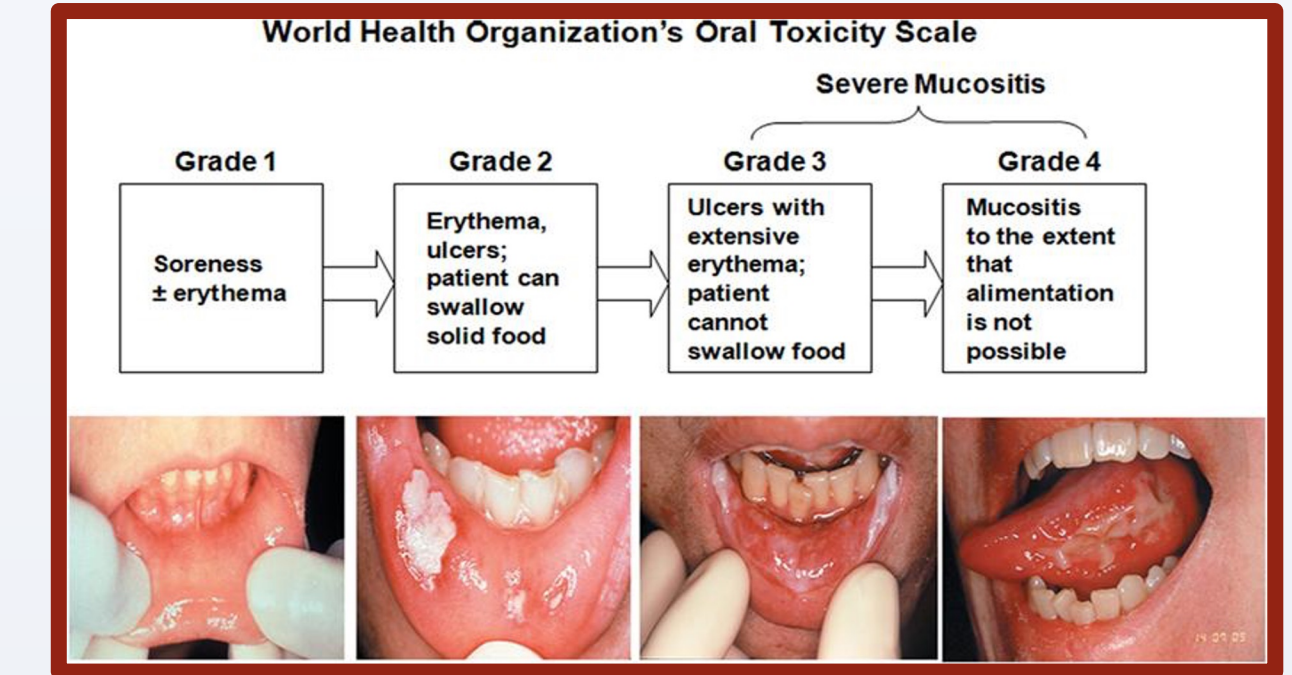
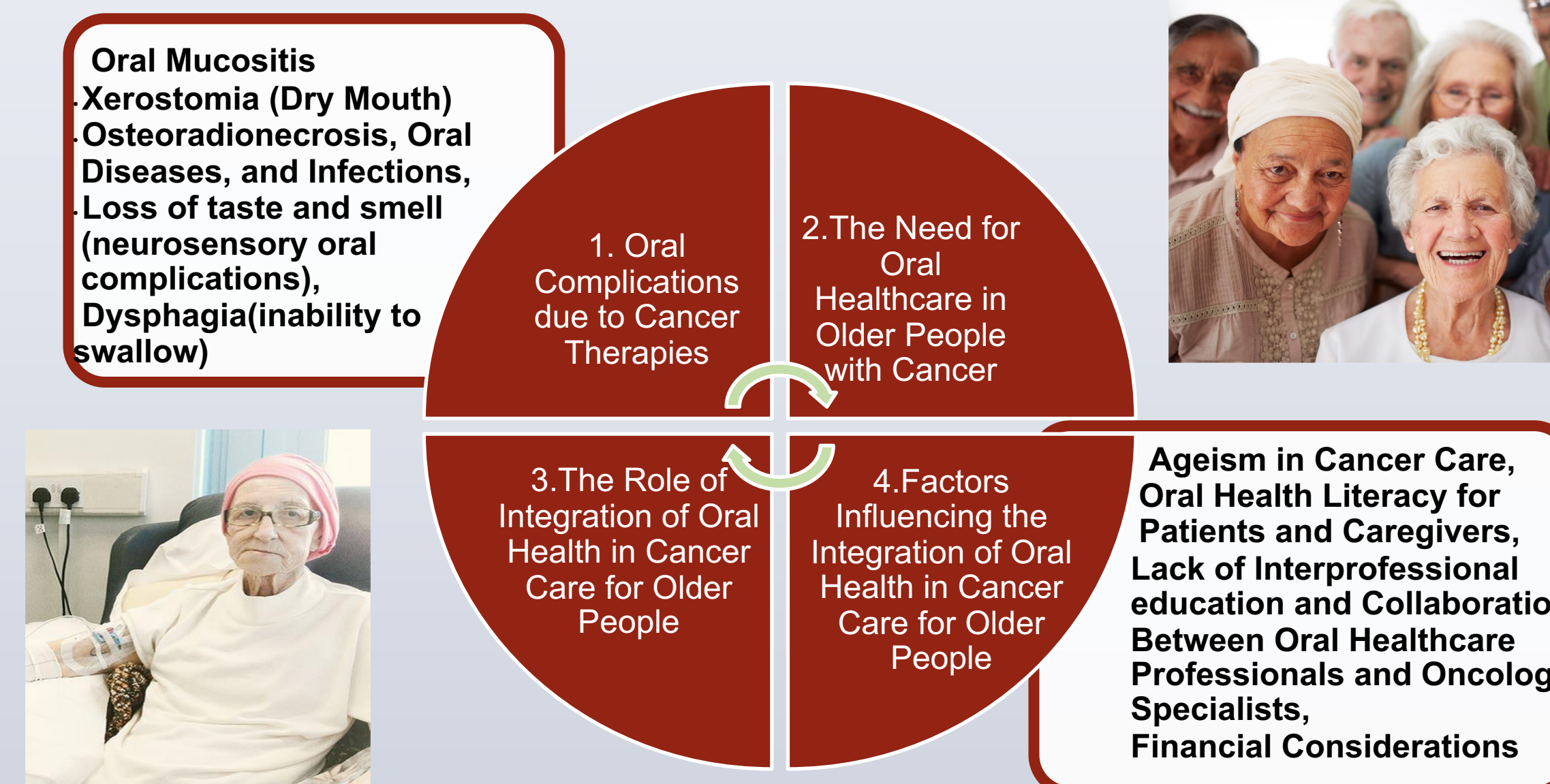
\*Cognitive decline with reduced ability to maintain oral care

\*Comorbidities, Polypharmacy and their side effects

**Fig. 2: Importance Of Oral Healthcare For Older People With Cancer**

## Results

**Fig 3: The reviewed literature had four main foci**



**Fig.4: WHO's Scale for Mucositis caused by cancer therapy**



## Recommendation

**Fig.5: To Develop Cost-effective, Sustainable, and Age-appropriate Interventions And Guidelines to Support the Global Oral Health Action Plan (2023-2030),**

## References

Marosi C, Köller M. Challenge of cancer in the elderly. *Esmo Open*. 2016;1(3):e000020.  
 Chan AKY, Tamrakar M, Jiang CM, Lo ECM, Leung KCM, Chu CH. Common Medical and Dental Problems of Older Adults: A Narrative Review. *Geriatrics*. 2021;6(3):76.  
 Wong HM. Oral complications and management strategies for patients undergoing cancer therapy. *The Scien Wor J*. 2014;2014. :581795.  
 Sroussi HY, Epstein JB, Bensadoun RJ, et al. Common oral complications of head and neck cancer radiation therapy: mucositis, infections, saliva change, fibrosis, sensory dysfunctions, dental caries, periodontal disease, and osteoradionecrosis. *Cancer Med*. 2017;6(12):2918-2931  
 Gao, L., Xu, T., Huang, G., Jiang, S., Gu, Y., & Chen, F. (2018). Oral microbiomes: more and more importance in oral cavity and whole body. *Protein & cell*, 9(5), 488-500.  
 Epstein JB, Thariat J, Bensadoun RJ, et al. Oral complications of cancer and cancer therapy: from cancer treatment to survivorship. *CA Cancer J Clin*. 2012;62(6):400-422.  
 Hou, K., Wu, Z. X., Chen, X. Y., Wang, J. Q., Zhang, D., Xiao, C., ... & Chen, Z. S. (2022). Microbiota in health and diseases. *Signal transduction and targeted therapy*, 7(1), 1-28.