

# Systemic oncological treatments for advanced esophageal cancer: an assessment of the existing evidence and controversies about their appropriateness

**Authors:** Santero Marilina; Urrütia Gerard; Bonfill Xavier; Appropriateness of Systemic Oncological Treatments for Advanced Cancer (ASTAC) Research Group.

## Background

Advanced esophageal cancer (EC) is a highly aggressive malignancy that poses significant challenges to patients and healthcare providers worldwide.

## Objectives

To comprehensively evaluate systemic oncological treatments (SOT) for advanced EC, examining their effectiveness, safety, and appropriateness based on existing evidence.

## Methods

Part of the broader ASTAC-Study project, this research aims to describe and assess evidence on the efficacy and appropriateness of anticancer drugs in advanced non-intestinal digestive cancers. Esophageal cancer, including gastroesophageal junction, was the focal point. The project comprised three studies: Study 1 conducted

an overview of systematic reviews; Study 2 critically assessed European clinical practice guidelines (CPGs); Study 3 conducted a scoping review and evidence map.

## Results

**Table 1: ASTAC-Study Advanced Esophageal cancer**

<b>Study 1</b>	Systematic review of systematic reviews	Uncertainty about whether systemic oncological treatments (SOT), including chemotherapy (CT), immunotherapy, biological, and targeted therapy, improve overall survival (OS) and progression-free survival (PFS) over conservative approaches. Most systematic reviews had critically low methodological quality and lacked important outcomes.
<b>Study 2</b>	Critical assessment of European clinical practice guidelines (CPGs)	Low methodological quality in half of the CPGs published since 2010, with a lack of credible recommendations.
<b>Study 3</b>	Scoping review and evidence map	Identified evidence on the efficacy and safety of SOT compared to best supportive care (BSC) for advanced gastroesophageal cancer. Diverse inclusion criteria and inadequate reporting led to heterogeneity in patient prognosis and control arm definition.

## Conclusions

The available evidence for treating advanced EC patients lacks consistency, leading to discrepancies with recommendations by relevant CPGs. Potential bias may favor the overuse of anticancer drugs over BSC. High-quality research is urgently needed to understand SOT effectiveness versus BSC in managing advanced EC. Enhancing methodological precision, considering patient preferences, and addressing evidence gaps will contribute to informed clinical decision-making and improved patient outcomes.

**Study 1:**



**Study 2:**



**Study 3:**



## References

Santero M, Pérez-Bracchiglione J, Acosta-Dighero R, Meade AG, Antequera A, Auladell-Rispau A, et al. Efficacy of systemic oncological treatments in patients with advanced esophageal or gastric cancers at high risk of dying in the middle and short term: an overview of systematic reviews. *BMC Cancer*. 2021;21: 712.

Santero M, Meade AG, Acosta-Dighero R, González L, Melendi S, Solà I, et al. European clinical practice guidelines on the use of chemotherapy for advanced oesophageal and gastric cancers: a critical review using the AGREE II and the AGREE-REX instruments. *Clin Transl Oncol*. 2022;24: 1588–1604.

Marilina S, Adriana M, Anna S, Roberto A-D, Nicolás M, Jesús QM, et al. Comparative analysis of systemic oncological treatments and best supportive care for advanced gastroesophageal cancer: A comprehensive scoping review and evidence map. *J Evid Based Med*. 2023;16: 216–236.