

Systematic review and meta-analysis of the effect of metformin treatment on overall mortality rates in women with endometrial cancer and type 2 diabetes mellitus(Review)

- Perez-Lopez, F.R.^a,
- Pasupuleti, V.^b,
- Gianuzzi, X.^c,
- Palma-Ardiles, G.^c,
- Hernandez-Fernandez, W.^c,
- Hernandez, A.V.^{cd}Email Author
- View Correspondence (jump link)

- ^aDepartment of Obstetrics and Gynecology, University of Zaragoza, Faculty of Medicine, Lozano Blesa University Hospital, Domingo Miral s/n, Zaragoza, Spain
- ^bProEd Communications Inc., Cleveland, OH, United States
- ^cSchool of Medicine, Universidad Peruana de Ciencias Aplicadas (UPC), Lima, Peru
- ^dUniversity of Connecticut/Hartford Hospital Evidence-based Practice Center, 80 Seymour St, Hartford, CT, United States

Maturitas Volume 101, 1 July 2017, Pages 6-11

Abstract

Background Obesity, insulin resistance and type 2 diabetes mellitus (T2DM) have been associated with endometrial cancer (EC). In this systematic review and meta-analysis we evaluated the effect of metformin on clinical outcomes in patients with EC and insulin resistance or T2DM. Methods Four research databases were searched for original articles published in all languages up to 30 October 2016. Outcomes of interest were overall mortality (OM), cancer-specific mortality, disease progression, and metastases. We performed a random effect meta-analysis of adjusted effects expressed as hazard ratios (HR); heterogeneity among studies was described with the I^2 statistic. Results Of the 290 retrieved citations, 6 retrospective cohort studies in women with EC (n = 4723) met the inclusion criteria, and 8.9% to 23.8% were treated with metformin; OM data was available from 5 studies. In 4 studies of EC patients (n = 4132), metformin use was associated with a significant reduction in OM in comparison with not using metformin (adjusted HR [aHR] 0.64, 95% CI 0.45–0.89, p = 0.009). In three studies evaluating patients with EC and T2DM (n = 2637), metformin use was associated with a significant reduction in OM (aHR 0.50, 95%CI 0.34–0.74, p = 0.0006). There was low to moderate heterogeneity of adjusted effects across studies. There was no information about the effect of metformin on cancer-specific mortality, disease progression, or metastases. Conclusions Metformin treatment is associated with a significant reduction in OM irrespective of diabetes status in patients with EC. The survival benefit suggests that diabetes screening and maintenance of good glycemic control may improve outcomes in EC. © 2017 Elsevier B.V.

Author keywords

Endometrial cáncer; Metformin; Overall mortality; Type 2 diabetes mellitus

- **ISSN:** 03785122
- **CODEN:** MATUD
- **Source Type:** Journal
- **Original language:** English

- **DOI:** [10.1016/j.maturitas.2017.04.001](https://doi.org/10.1016/j.maturitas.2017.04.001)
- **Document Type:** Review
- **Publisher:** Elsevier Ireland Ltd

El texto completo de este trabajo no está disponible en el Repositorio Académico UPC por restricciones de la casa editorial donde ha sido publicado.