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# The Prevention and Control of Cancer by Metformin in Patients with Type 2 Diabetes: A Systematic Mapping Review Protocol

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# The Prevention and Control of Cancer by Metformin in Patients with Type 2 Diabetes: A Systematic Mapping Review Protocol

## **Disciplines**

Library and Information Science | Pharmacy and Pharmaceutical Sciences

**Review Title**

The Prevention and Control of Cancer by Metformin in Patients with Type 2 Diabetes: A Systematic Mapping Review Protocol

**Anticipated Start Date**

02 April 2018

**Anticipated Completion Date**

28 August 2018

**Named Contact (guarantor for the accuracy of the information presented)**

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**Review team members and their organizational affiliations**

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**Funding sources/sponsors:** None

**Conflicts of Interest:** None

**Review Question**

How effective is Metformin at preventing and controlling cancer in patients with Type 2 Diabetes?

**Objectives**

Review the literature systematically to map out and categorize the available research on the review question.

Map the determinants found by the review, and present this visually via a graph, table, or a chart.

Utilize the map to identify any gaps in the research and/or priority areas for future research.

**Searches**

We will search PubMed, Cochrane Library, and Clinicaltrials.gov. We will limit to articles published in English or Spanish. PubMed: Metformin[mesh] AND "Diabetes Mellitus, Type 2"[Mesh] AND "prevention and control"[sh] limit to cancer subset.

**Condition or Domain being Studied:** Cancer. Type 2 Diabetes.

**Participants/Population**

Inclusion: Adults with Type 2 Diabetes

Exclusion: Type 1 Diabetes

**Intervention, Exposures**

Metformin

**Types of Studies to be included initially**

We will include original research studies of any type, systematic reviews and meta-analyses.

**Primary Outcomes**

The prevention and control of cancer by Metformin in Type 2 Diabetic patients.

**Data Extraction (selection and coding)**

Two authors will review titles and abstract for the first round of screening. The third author will decide any disagreements at this phase. Next, two authors will review the full text of potential studies and assess them for eligibility. Any disagreement at this phase will again be resolved by the third author. Data extraction will be completed by all three reviewers.

Extracted information will include:

Participant Information: Gender, Age, Duration of Diabetes, Onset of Diabetes, Family History of Diabetes, Renal/Hepatic Function, Ethnicity, Existing Comorbidities

Intervention: Duration of therapy, dose of metformin

Outcome: Type of Cancer

Study Information: Title, Authors, Health Profession of Author, Year, Journal, Country of Study, Funder, Study Type, Number of Participants, Focus on Prevention, Control or both

**Strategy for Data synthesis**

We will provide a narrative synthesis of the findings of the included studies. The results will also be presented as charts, graphs and or tables in order to present a synthesis of subgroup analyses to the reader.

**Analysis of Subgroups or subsets**

This is a systematic mapping review, so while subgroup analyses may be undertaken, it is not possible to specify the groups in advance.

**Dissemination Plans**

We plan to submit the finished mapping review for publication in a scholarly journal. Additionally, when permitted a version of the manuscript will be posted to the college's institutional repository.

**Keywords**

Systematic mapping review; metformin; cancer; type 2 diabetes