

Oral Presentations

OP01 Causal Association Between Type 2 Diabetes Mellitus And Risk Of Cancer

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Introduction: Type 2 diabetes mellitus (T2DM) is a major public health problem. Evidence suggests an association between diabetes and cancer, but this may be distorted by confounding. This research aimed to identify and assess the evidence suggesting a causal association between T2DM and cancer.

Methods: A systematic review was conducted in Pubmed, Embase, CINAHL, Web of Science, and the Cochrane Library for literature on the association between T2DM and cancer, from inception to 7 May 2021. Case-control and cohort studies published in any language were considered. Based on a targeted literature review, a directed acyclic graph for each type of cancer was developed to test whether the causal effects were adequately controlled for potential confounding.

Results: A total of 131 studies with a low risk of bias were selected that reported 415 effect estimates of the association of T2DM with 57 types of cancer. Breast, colorectal, pancreas, prostate, and lung were the cancer sites with the highest number of studies. Causality was claimed in 57 studies, but only 34 percent of the outcomes were adequately controlled for confounders. Of the studies assessing a causal relationship for prostate and pancreatic cancer, 87 and 70 percent adequately controlled for confounding. In contrast, only 29 percent of lung cancer, 27 percent of colorectal cancer, and 17 percent of breast cancer results considered the minimal sufficient adjustment set. Lifestyle variables were identified as key potential confounders in more than 20 types of cancer, but they were not included in the analyses.

Conclusions: Many studies simply reported an association between diabetes and cancer. The policy implications of such studies are unclear. Of the studies claiming a causal link between diabetes and cancer, a large proportion did not adequately control for confounding. It is critical that studies take a systematic approach to identifying potential confounding factors, such as targeted reviews and the development of directed acyclic graph approaches, to estimate causal effects that may be useful in informing health policy.

OP04 The Efficacy Of Segmentectomy And Lobectomy For Non-Small Cell Lung Cancer: A Systematic Review And Meta-Analysis

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Introduction: The latest clinical practice guidelines for non-small cell lung cancer (NSCLC) published by the National Comprehensive Cancer Network in 2022 recommend that patients with NSCLC (>1 and ≤2 cm) should be diagnosed as T1b. Segmentectomy and lobectomy are equally effective in treating patients with NSCLC no bigger than 2 cm, and especially for tumors no bigger than 1 cm. However, the effectiveness of these treatments for NSCLC tumors between 1 and 2 cm is unknown. We conducted a systemic review and meta-analysis to assess the efficacy of these two surgical treatments in patients with T1b stage NSCLC.

Methods: We searched for randomized controlled trials (RCTs) and cohort studies investigating the efficacy of lobectomy and segmentectomy for patients with T1b stage NSCLC. Study quality was assessed with the Cochrane Quality in Prognosis Studies tool. We used random effects models to analyze overall survival (OS) and lung cancer-specific survival (LCSS), expressed as hazard ratios (HR) and 95% confidence intervals (CIs). The effect of covariates was assessed using subgroup analysis. All procedures were performed according to the PRISMA guidelines.

Results: We identified ten cohort studies that matched our selection criteria, with general low risk of quality, including a total of 37,691 patients. No publication bias was found. Compared to lobectomy, segmentectomy had lower OS (HR 1.31, 95% CI: 1.16, 1.47; p=0.026) and LCSS (HR 1.21, 95% CI: 1.03, 1.42, p=0.015) before Cox regression. After multivariable Cox regression, adjusted by age, sex,

histological type, and lymph node section, segmentectomy had similar OS (HR 1.17, 95% CI: 1.00, 1.37; $p=0.2$) and LCSS (HR 1.10, 95% CI: 0.89, 1.36; $p=0.8$).

Conclusions: Segmentectomy can be used to treat patients with T1b stage NSCLC. Patients who undergo segmentectomy have survival outcomes that are the same as those of patients who received lobectomy. This evidence-based observation provides a reference for surgical choice in the treatment of patients with T1b stage NSCLC, which should be further confirmed through RCTs.

OP6 Development Of A Tool To Support The Collection Of Policy-Relevant, Stakeholder-Informed Clinical Evidence For Innovative Digital Health Technologies

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Introduction: The number of studies on digital health technologies (DHTs) for remote treatment and patient self-management is increasing. Existing health technology assessment (HTA) frameworks for DHTs, which guide researchers in generating evidence suitable for HTA, do not cover all domains of the commonly used EUnetHTA Core Model, and DHT-specific considerations have not been informed by a large stakeholder preference study. Our aim was to develop a stakeholder prioritized, literature-informed checklist of DHT-specific considerations that aligns with the EUnetHTA model.

Methods: We conducted two systematic reviews to identify: (i) DHT evaluation frameworks published to March 2020 for content; and (ii) primary research on DHTs published from 1 January 2015 to 20 March 2020.

Stakeholder prioritization of issues was performed using a best-worst scaling preference study among a broad cross-section of patients, carers, health professionals, and the general population in Australia, Canada, New Zealand, and the UK. Systematic review issues were prioritized and adapted for use as a practical checklist.

Results: DHT evaluation content was recommended by the 44 identified frameworks for 28 of the 145 issues in the EUnetHTA model and for 22 new DHT-specific issues. A coverage assessment of 112 clinical studies of remote treatment and self-management DHTs for patients with cardiovascular disease or diabetes revealed that less than half covered DHT-specific content in all but one domain, or traditional HTA content in clinical effectiveness and ethical analysis. The preference survey of 1,251 stakeholders identified broad agreement on the 12 most important DHT attributes, six of which were related to safety. The most important attribute was “helps health professionals respond quickly when changes in patient care are needed”, which is not a focus of existing DHT HTA frameworks.

Conclusions: The review identified mismatches in the content generated by DHT clinical studies and that required for DHT-specific

HTAs. These findings informed the development of an extended checklist comprising 22 stakeholder-prioritized DHT-specific considerations, which are aligned with the EUnetHTA model and will help ensure the planning of DHT-specific research generates evidence suitable for HTA.

OP7 Eleven Years Of Conitec: Advances And Challenges Of Patient And Public Involvement In The Brazilian Health Technology Assessment Process

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Introduction: Patient and public involvement (PPI) is a core element of the health technology assessment (HTA) process. Since its creation in 2011, the National Committee for Health Technology Incorporation (Conitec) has promoted initiatives to include stakeholders in HTA for the Brazilian Public Health System (SUS). This work aimed to present a report on the advances and challenges related to PPI in 11 years of Conitec.

Methods: A retrospective analysis of PPI actions carried out at Conitec was conducted, based on an analysis of minutes and records of meetings and discussions held internally and documents published on Conitec’s website.

Results: Events and meetings were held over the years with different actors interested in the HTA process. Since 2015, a plain-language version of the technical report has been made available to the public during public consultations for each HTA topic. Recently, a register of patients, specialists, and SUS managers was created to form a database and establish a network with the stakeholders. Since 2020, SUS users have been allocated time to speak at Conitec’s meetings. Qualitative analysis of public consultation documents started in 2021 and a pilot qualitative evidence synthesis was carried out in 2022. These initiatives, although not directly focused on PPI, increase the consideration of the perspectives of patients, family members, and caregivers in the HTA process.

Conclusions: PPI actions implemented at Conitec have significantly promoted inclusiveness and exchanges among stakeholders, contributing to a greater transparency regarding Conitec’s actions. Nonetheless, we have important challenges on our horizon, such as strengthening connections with primary healthcare managers and professionals and social movements. It is also strategic to expand the technical and scientific discussion on PPI and qualitative approaches with HTA researchers and the voting members of Conitec. Finally, another aim is to improve knowledge of HTA and public health policy among law professionals and the pharmaceutical industry in Brazil.