

## **The Top Papers of the Year: Should they change our practices? And how?**

After the popularity of this session at 2015 Diabetes Update, this session will be repeated at the 2017 Diabetes Update conference. Building on the importance of applying the most recent clinical evidence, this session intends not only get conference participants informed about the most recent, key clinical trials, but also to think about if and how the evidence should be applied to their patients.

To stimulate this thought, our panel will represent the perspectives of three stakeholder groups involved in the care of diabetes: a family physician, an endocrinologist, and a person living with diabetes. Each will be asked to review recent publications and provide their unique perspectives on the utility of the results.

Each of the “Top Papers” was selected using one or more of the following criteria:

- 1) Published within the preceding 18 months.
- 2) Identified as “potentially impactful” by members of the Banting and Best Diabetes Center and members of the University of Toronto Division of Endocrinology
- 3) Frequently accessed and downloaded from websites of leading clinical diabetes journals
- 4) Addresses a common question, dilemma or practice in the delivery or organization of patient care
- 5) Potentially challenges existing treating paradigms

**The Top Papers of the Year as selected by the planning committee (in order of date published):**

1. Studies on the use of antihyperglycemic agents and reduction in cardiovascular outcomes and mortality

**A. Empagliflozin, Cardiovascular Outcomes, and Mortality in Type 2 Diabetes**

Zinman B, Wanner C, Lachin JM, et al.

N Engl J Med 2015; 373:2117-2128 [November 26, 2015](#)

URL: <http://www.nejm.org/doi/full/10.1056/NEJMoa1504720#t=article>

**B. Liraglutide and Cardiovascular Outcomes in Type 2 Diabetes**

Marso SP, Daniels GH, Brown-Frandsen, K., et al.

N Engl J Med 2016; 375:311-322 [July 28, 2016](#)

URL: <http://www.nejm.org/doi/full/10.1056/NEJMoa1603827#t=article>

**C. Semaglutide and Cardiovascular Outcomes in Patients with Type 2 Diabetes**

**Marso SP, Bain SC, Consoli A, et al.**

N Engl J Med 2016; 375:1834-1844 [November 10, 2016](#)

URL: <http://www.nejm.org/doi/full/10.1056/NEJMoa1607141#t=article>

WHY WE SELECTED THESE STUDIES: Clinical practice guidelines have changed as a result of these studies investigating the effects of antihyperglycemic medications on cardiovascular outcomes, renal outcomes and mortality. We will discuss the collective impact of these three studies.

## **2. The Effectiveness of Pharmacist Interventions on Cardiovascular Risk : The Multicenter Randomized Controlled RxEACH Trial**

Tsuyuki RT, Al Hamarneh YN, Jones CA, et al.

[J Am Coll Cardiol](#). 2016 Jun 21;67(24):2846-54. doi: 10.1016/j.jacc.2016.03.528. Epub 2016 Apr 4.

URL: <http://www.onlinejacc.org/content/67/24/2846>

WHY WE SELECTED THIS STUDY: Pharmacists are playing increasing roles to help people manage chronic disease, including diabetes. But does their involvement make a difference? This study examines the effect of pharmacist intervention on cardiovascular risk.

## **3. Short-term safety, tolerability and efficacy of a very low-calorie-ketogenic diet interventional weight loss program versus hypocaloric diet in patients with type 2 diabetes mellitus.**

Goday A, Bellido D, Sajoux I, et al.

*Nutrition & Diabetes* (2016) **6**, e230; doi:10.1038/nutd.2016.36 Published online 19 September 2016

URL: <http://www.nature.com/nutd/journal/v6/n9/full/nutd201636a.html>

WHY WE SELECTED THIS STUDY: Many people try various diets in attempts to lose weight. This study is one of few that attempts to provide a scientific answer regarding whether they are safe and effective.

## **4. Novel glucose-sensing technology and hypoglycaemia in type 1 diabetes: a multicentre, non-masked, randomised controlled trial.**

Bolinder J, Antuna R, Geelhoed-Duilvestijn P, et al.

[Lancet](#). 2016 Nov 5;388(10057):2254-2263. doi: 10.1016/S0140-6736(16)31535-5. Epub 2016 Sep 12.

URL: <http://www.sciencedirect.com/science/article/pii/S0140673616315355>

WHY WE SELECTED THIS STUDY: This trials provides an update on the impact of technologies for people living with type 1 diabetes. Is a reduction in hypoglycemia worth the cost?

**5. Do Mobile Phone Applications Improve Glycemic Control (HbA<sub>1c</sub>) in the Self-management of Diabetes? A Systematic Review, Meta-analysis, and GRADE of 14 Randomized Trials**

Hou C, Carter B, Hewitt J, et al.

Diabetes Care 2016 Nov; 39(11): 2089-2095.

URL: <https://doi.org/10.2337/dc16-0346>

WHY WE SELECTED THIS STUDY FOR DISCUSSION: Mobile phone apps are common place. While ubiquitous and accessible, does this provide us a compelling reason to embrace mobile technology?

**6. Albuminuria Changes and Cardiovascular and Renal Outcomes in Type 1 Diabetes: The DCCT/EDIC Study.**

De Boer IH, Gao K, Cleary PA et al.

[Clin J Am Soc Nephrol](#). 2016 Nov 7;11(11):1969-1977. Epub 2016 Oct 24.

URL: <http://cjasn.asnjournals.org/content/11/11/1969.abstract>

WHY WE SELECTED THIS STUDY FOR DISCUSSION: In this study, microalbuminuria and macroalbuminuria were associated with higher risks of cardiac and renal dysfunction, yet treatment to achieve normoalbuminuria did not affect outcomes. Based on this, should we continue to treat microalbuminuria?