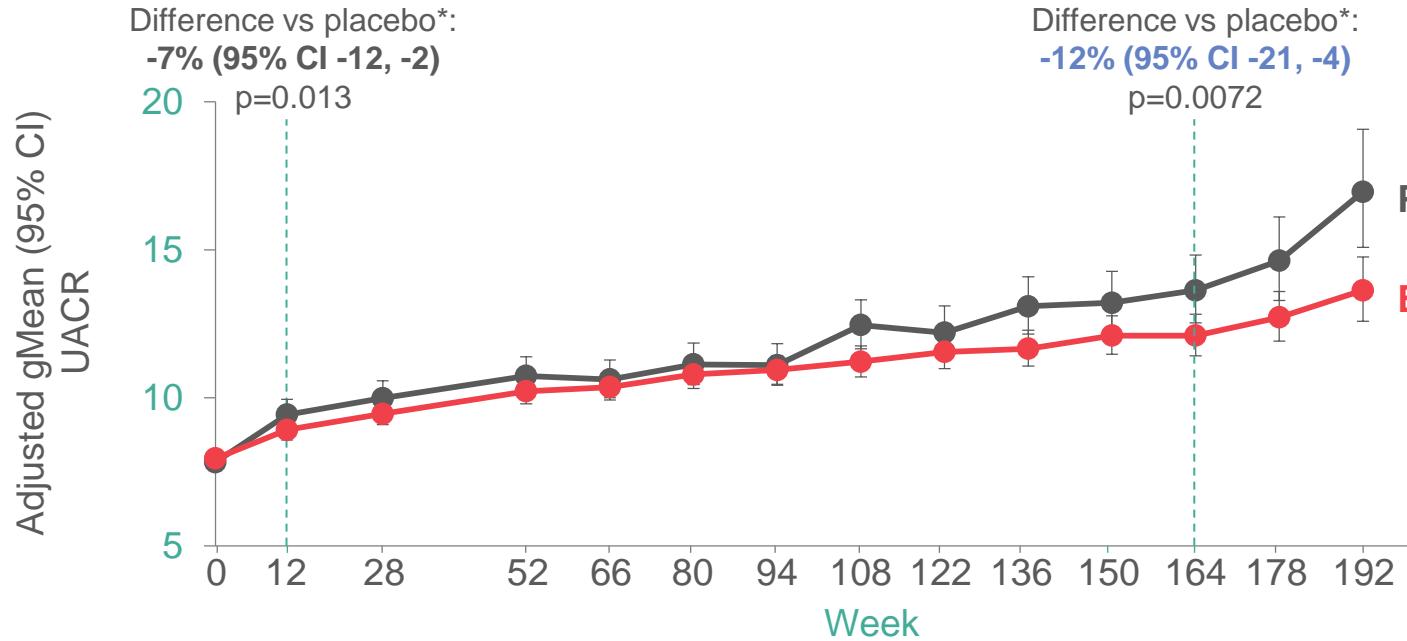
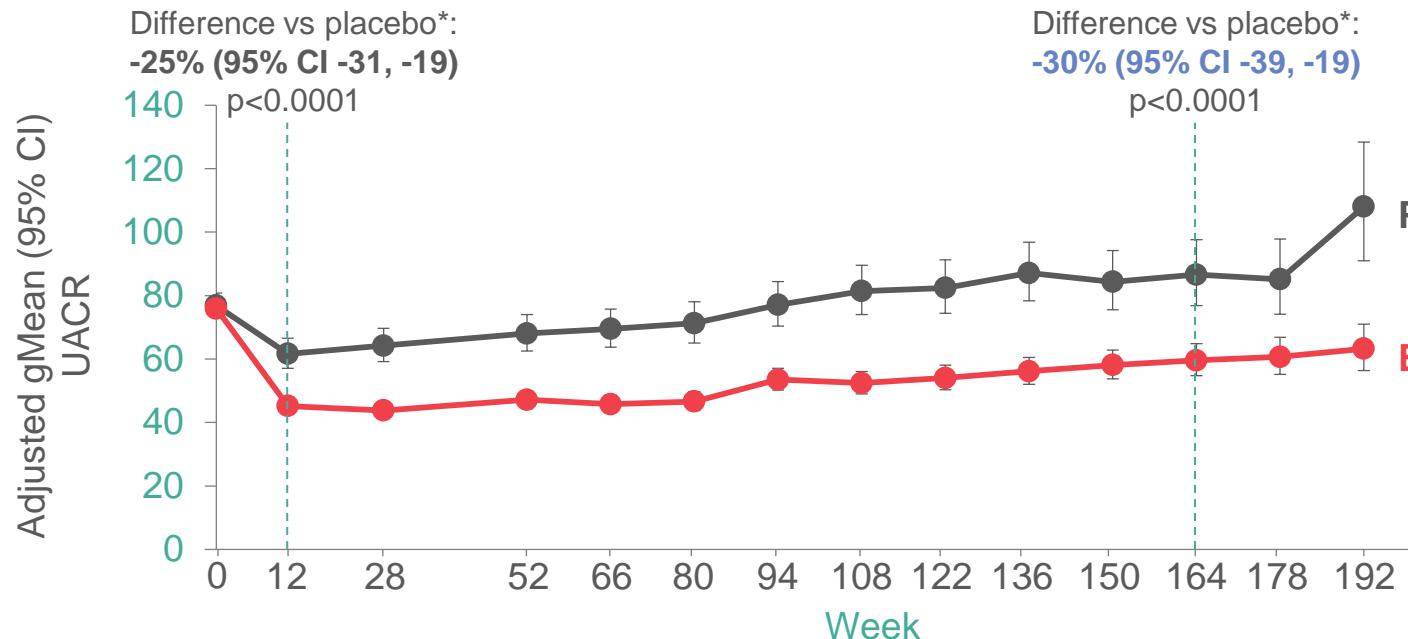


# UACR over 192 weeks: Patients with normoalbuminuria at baseline



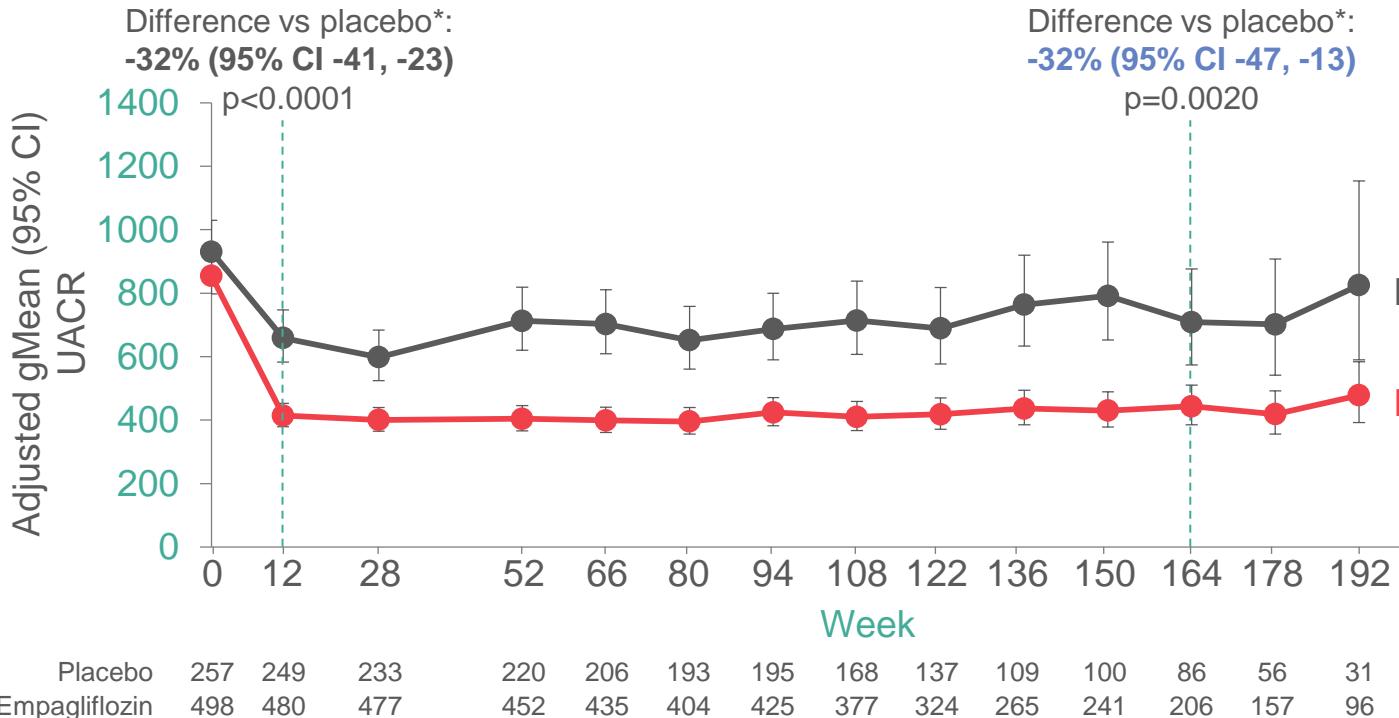
Placebo	1361	1334	1302	1264	1231	1157	1187	1055	891	760	671	584	449	280
Empagliflozin	2736	2677	2642	2570	2509	2406	2465	2225	1841	1597	1435	1254	983	625

# UACR over 192 weeks: Patients with microalbuminuria at baseline



Placebo	658	643	631	612	588	546	570	506	426	376	330	291	213	128
Empagliflozin	1311	1283	1249	1217	1185	1134	1156	1033	869	739	661	583	449	298

# UACR over 192 weeks: Patients with macroalbuminuria at baseline



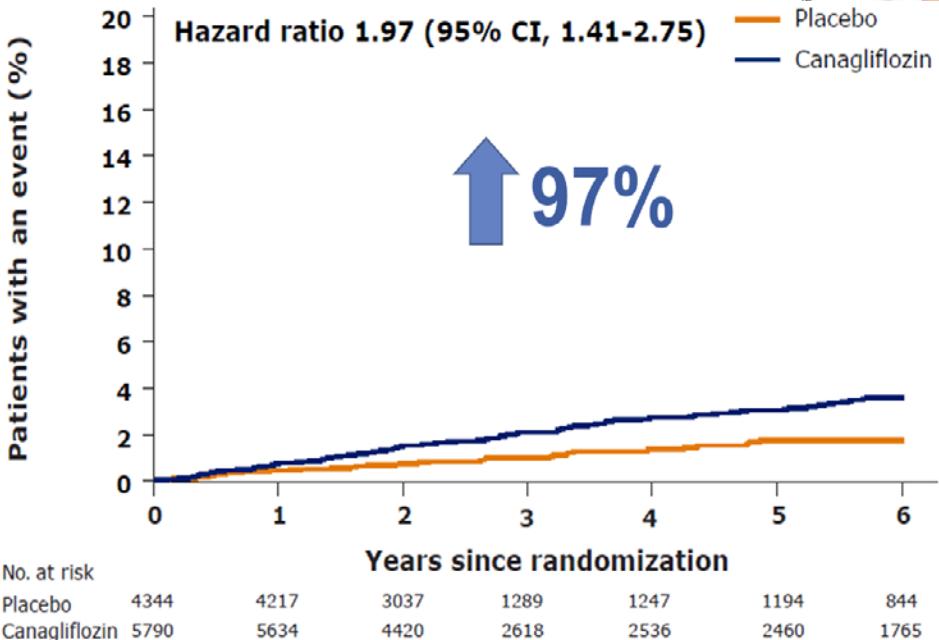
# Lower- Extremity Amputations



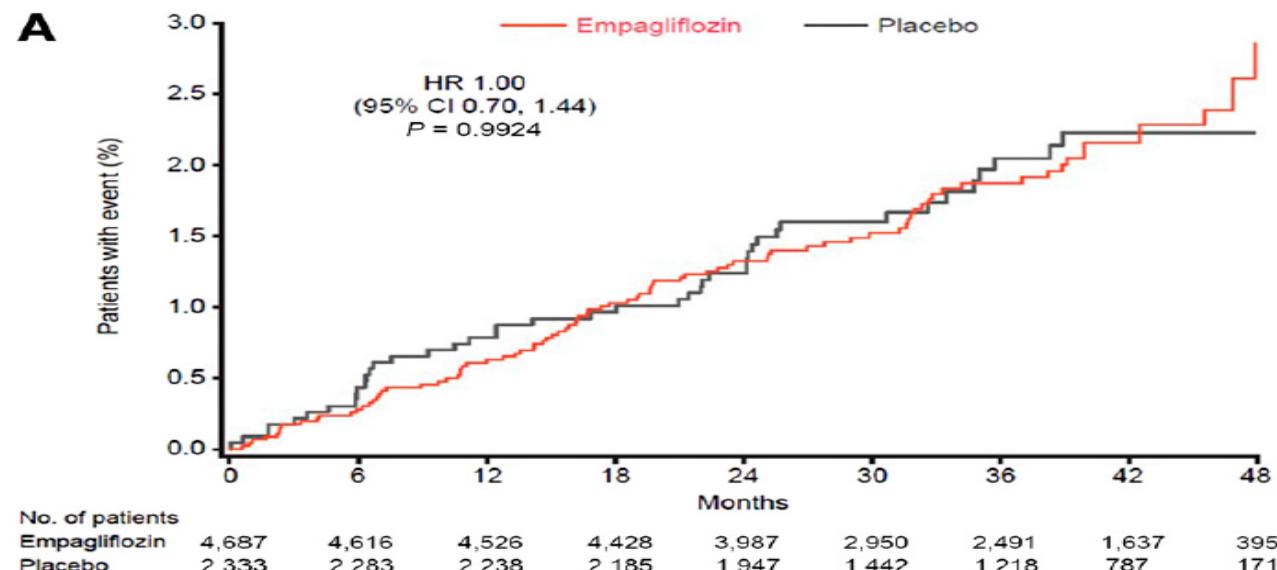
Interim clinical trial results find increased risk of leg and foot amputations, mostly affecting the toes, with the diabetes medicine canagliflozin (Invokana, Invokamet); FDA to investigate

### Safety Announcement

[5-18-2016] The U.S. Food and Drug Administration (FDA) is alerting the public about interim safety results from an ongoing clinical trial that found an increase in leg and foot amputations, mostly affecting the toes, in patients treated with the diabetes medicine canagliflozin (Invokana, Invokamet). We have not determined whether canagliflozin increases the risk of leg and foot amputations. We are currently investigating this new safety issue and will update the public when we have more information.



# Empagliflozin and Assessment of Lower-Limb Amputations in the EMPA-REG OUTCOME Trial



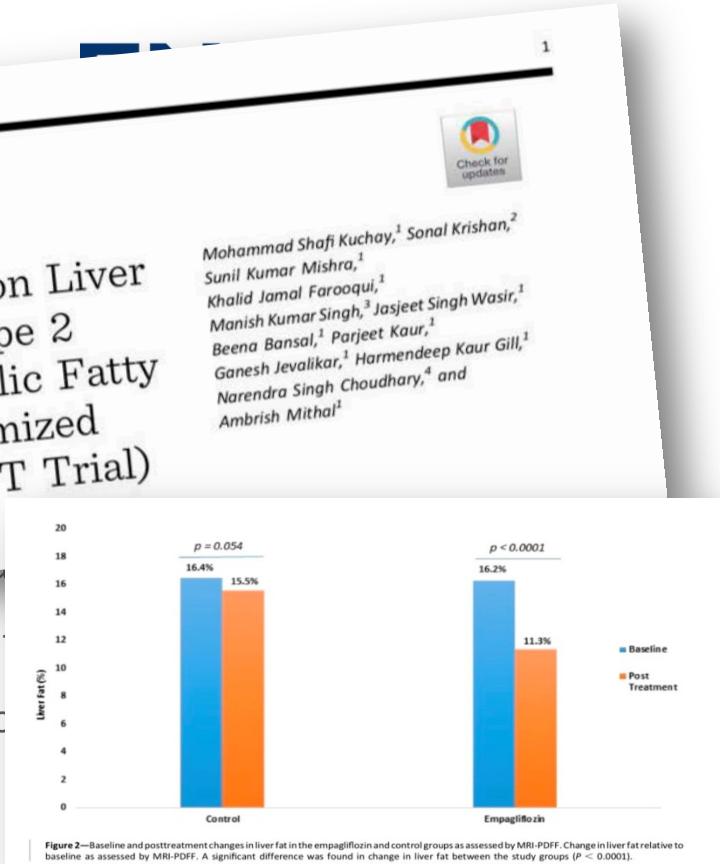
Silvio E. Inzucchi,<sup>1</sup> Hristo Iliev,<sup>2</sup>  
Egon Pfarr,<sup>2</sup> and Bernard Zinman<sup>3</sup>



## Effect of Empagliflozin on Liver Fat in Patients With Type 2 Diabetes and Nonalcoholic Fatty Liver Disease: A Randomized Controlled Trial (E-LIFT Trial)

<https://doi.org/10.2337/dc18-0165>

15.6 percent  
between groups





as.com

14 h ·

Año 2048. Rafa Nadal, con 62 años, gana su 40º Roland-Garros 😂😂  
<http://ow.ly/mVkJ30kr0rB>

https://twitter.com/wesportfr

Jun 2048

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

# Empagliflozina, y Eventos Cardiovasculares en pacientes que han pagado la hipoteca o no

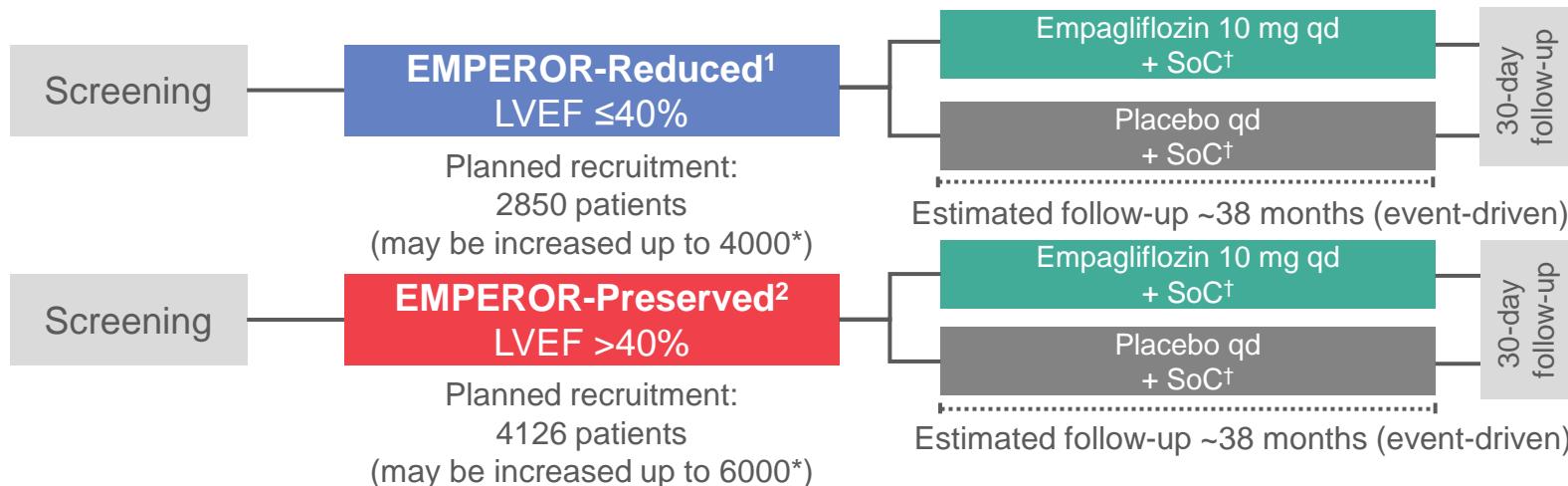
Subestudio del Empa-Reg Outcomes

Bernard Zinman, M.D., Christoph Wanner, M.D., John M. Lachin, Sc.D.,  
David Fitchett, M.D., Erich Bluhmki, Ph.D., Stefan Hantel, Ph.D.,  
Michaela Mattheus, Dipl. Biomath., Theresa Devins, Dr.P.H.,  
Odd Erik Johansen, M.D., Ph.D., Hans J. Woerle, M.D., Uli C. Broedl, M.D.,  
and Silvio E. Inzucchi, M.D., for the EMPA-REG OUTCOME Investigators



**EMPEROR**  
HEART FAILURE STUDIES

- **Aim:** To investigate the **safety and efficacy of empagliflozin** versus placebo on top of guideline-directed medical therapy in patients with HF with **reduced<sup>1</sup>** or **preserved<sup>2</sup>** ejection fraction, with/without T2D.
- **Primary Objective:** Time to first event of adjudicated CV death or adjudicated HHF.



\*Based on blinded assessment of event rate; †Guideline-directed medical therapy; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association; qd, once daily; SoC, standard of care; 1. ClinicalTrials.gov NCT03057977; 2. ClinicalTrials.gov NCT03057951



## EMPERIAL HEART FAILURE STUDIES

**Primary Objective:**  
Change from  
baseline to 12W in  
exercise capacity  
(6MWT).

**Aim:** To investigate the effects of empagliflozin 10mg on exercise ability, heart failure symptoms and quality of life in patients with chronic heart failure with HFrEF and HFpEF, with/without T2D.

**Planned to start in March 2018**





## EMPA-VISION

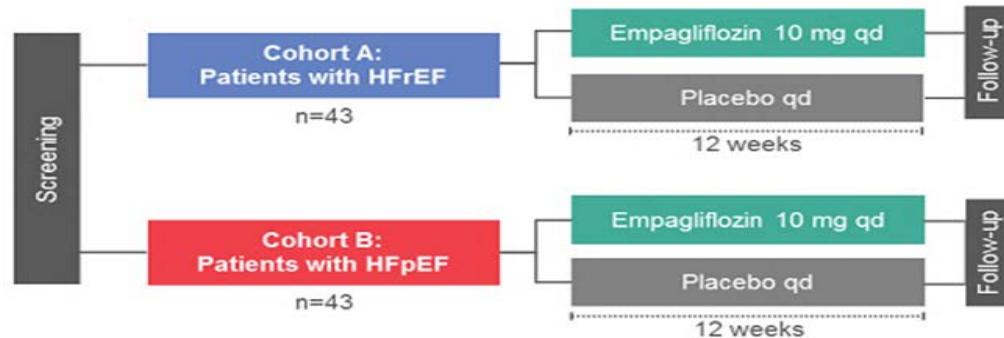
HEART FAILURE  
STUDIES

### Primary Objective:

Change from baseline to 12W in PCr/ATP ratio in resting state.

**Aim:** To investigate the effects of **empagliflozin 10mg** on **cardiac energetics** in patients with chronic heart failure with reduced or preserved ejection fraction (**HFrEF** and **HFpEF**).

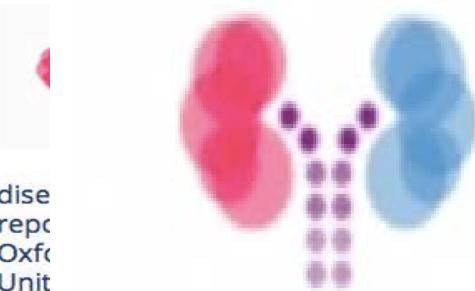
**Planned to start in March 2018**



## Boehringer Ingelheim and Lilly announce an academic collaboration with University of Oxford to investigate the effects of empagliflozin in people with chronic kidney disease

- 
- 

ple with chronic kidney disease explores the efficacy and safety of



### EMPA-KIDNEY

The study of heart and kidney protection with empagliflozin

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#### Media contact



**Dr Petra Kienle**

# ACTUALIZACION TERAPEUTICA EMPAGLIFLOZINA

@Cristob\_morales

INTRO: DM2 Y ECV

EECC CLASICOS Y DE  
SEGURIDAD CV EN DIABETES

NUEVAS PUBLICACIONES

GUIAS CLINICAS

# GUIAS DE DIABETES



Aquí Centro de Ayuda con las Guías de Diabetes, si quieras tratar a tu paciente según ADA pulse 1, según AACe pulse 2, según SEEN pulse 3, según GDPS pulse 4, según G.Canadienses pulse 5, según SEMI pulse 6, según CardiologiaP2 pulse 7 ... etc . Si desea dejar al paciente como está cuelgue el teléfono



## Dual Therapy

### Antihyperglycemic Therapy in Adults with Type 2 Diabetes

At diagnosis, initiate lifestyle management, set A1C target, and initiate pharmacologic therapy based on A1C:

A1C is less than 9%, consider Monotherapy.

A1C is greater than or equal to 9%, consider Dual Therapy.

A1C is greater than or equal to 10%, blood glucose is greater than or equal to 300 mg/dL, or patient is markedly symptomatic, consider Combination Injectable Therapy (See Figure 8.2).

Monotherapy

Lifestyle Management + Metformin

## Lifestyle Management + Metformin + Additional Agent

ASCVD?

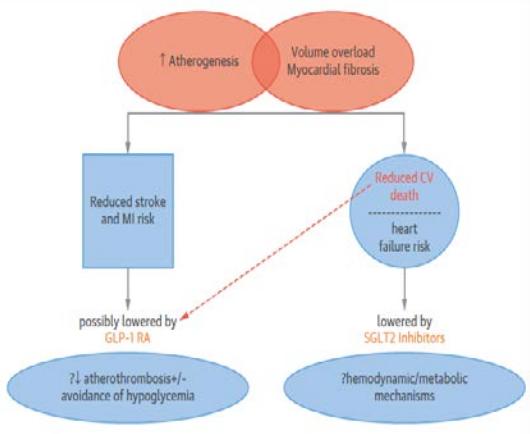
Yes:

- Add agent proven to reduce major adverse cardiovascular events and/or cardiovascular mortality (see recommendations with \* on p. S75 and **Table 8.1**)

No:

- Add second agent after consideration of drug-specific effects and patient factors (See Table 8.1)

		Efficacy*	Hypoglycemia	Weight Change	CV Effects		Cost	Oral/SQ	Renal Effects		Additional Considerations
					ASCVD	CHF			Progression of DKD	Dosing/Use considerations	
<b>Metformin</b>		High	No	Neutral (Potential for Modest Loss)	Potential Benefit	Neutral	Low	Oral	Neutral	▪ Contraindicated with eGFR <30	▪ Gastrointestinal side effects common (diarrhea, nausea) ▪ Potential for B12 deficiency
<b>SGLT-2 Inhibitors</b>		Intermediate	No	Loss	Benefit: canagliflozin, empagliflozin†	Benefit: canagliflozin, empagliflozin	High	Oral	Benefit: canagliflozin, empagliflozin	▪ Canagliflozin: not recommended with eGFR <45 ▪ Dapagliflozin: not recommended with eGFR <60; contraindicated with eGFR <30 ▪ Empagliflozin: contraindicated with eGFR <30	▪ <b>FDA Black Box:</b> Risk of amputation (canagliflozin) ▪ Risk of bone fractures (canagliflozin) ▪ DKA risk (all agents, rare in T2DM) ▪ Genitourinary infections ▪ Risk of volume depletion, hypotension ▪ ↑LDL cholesterol
<b>GLP-1 RAs</b>		High	No	Loss	Neutral: lixisenatide, exenatide extended release  Benefit: liraglutide†	Neutral	High	SQ	Benefit: liraglutide	▪ Exenatide: not indicated with eGFR <30 ▪ Lixisenatide: caution with eGFR <30 ▪ Increased risk of side effects in patients with renal impairment	▪ <b>FDA Black Box:</b> Risk of thyroid C-cell tumors (Brigatinib, albiglutide, dulaglutide, exenatide extended release)  ▪ Gastrointestinal side effects common (nausea, vomiting, diarrhea) ▪ Injection site reactions ▪ ?Acute pancreatitis risk
<b>DPP-4 Inhibitors</b>		Intermediate	No	Neutral	Neutral	Potential Risk: saxagliptin, alogliptin	High	Oral	Neutral	▪ Renal dose adjustment required; can be used in renal impairment	▪ Potential risk of acute pancreatitis ▪ Joint pain
<b>Thiazolidinediones</b>		High	No	Gain	Potential Benefit: pioglitazone	Increased Risk	Low	Oral	Neutral	▪ No dose adjustment required ▪ Generally not recommended in renal impairment due to potential for fluid retention	▪ <b>FDA Black Box:</b> Congestive heart failure (pioglitazone, rosiglitazone)  ▪ Fluid retention (edema; heart failure) ▪ Benefit in NASH ▪ Risk of bone fractures ▪ Bladder cancer (pioglitazone) ▪ ↑LDL cholesterol (rosiglitazone)
<b>Sulfonylureas (2nd Generation)</b>		High	Yes	Gain	Neutral	Neutral	Low	Oral	Neutral	▪ Glyburide: not recommended ▪ Glipizide & glimepiride: initiate conservatively to avoid hypoglycemia	▪ FDA Special Warning on increased risk of cardiovascular mortality based on studies of an older sulfonylurea (tolbutamide)
<b>Insulin</b>	Human Insulin	Highest	Yes	Gain	Neutral	Neutral	Low	SQ	Neutral	▪ Lower insulin doses required with a decrease in eGFR; titrate per clinical response	▪ Injection site reactions ▪ Higher risk of hypoglycemia with human insulin (NPH or premixed formulations) vs. analogs
	Analogs						High	SQ			



## CENTRAL ILLUSTRATION Novel Paradigm for Care of the Patient With CV Disease and T2DM

Patient with established cardiovascular (CV) disease but no prior Type 2 diabetes mellitus (T2DM):  
Cardiologist to perform routine, systematic measurement of HbA1c to evaluate presence of T2DM

And/or

Eligible patients with CV disease and prior T2DM

Consider recommending treatments if no contraindication:



SGLT2 inhibitor:  
empagliflozin

Decreased CV mortality and  
decreased heart failure hospitalizations

- + Decreased blood glucose
- + Promotes weight loss
- + Renal benefits



GLP-1 receptor agonist:  
liraglutide

Decreased CV mortality  
+ Decreased blood glucose  
+ Promotes weight loss  
+ Potential renal benefits

or

Refer to primary care physician or endocrinologist

Follow CV and T2DM progress in tandem

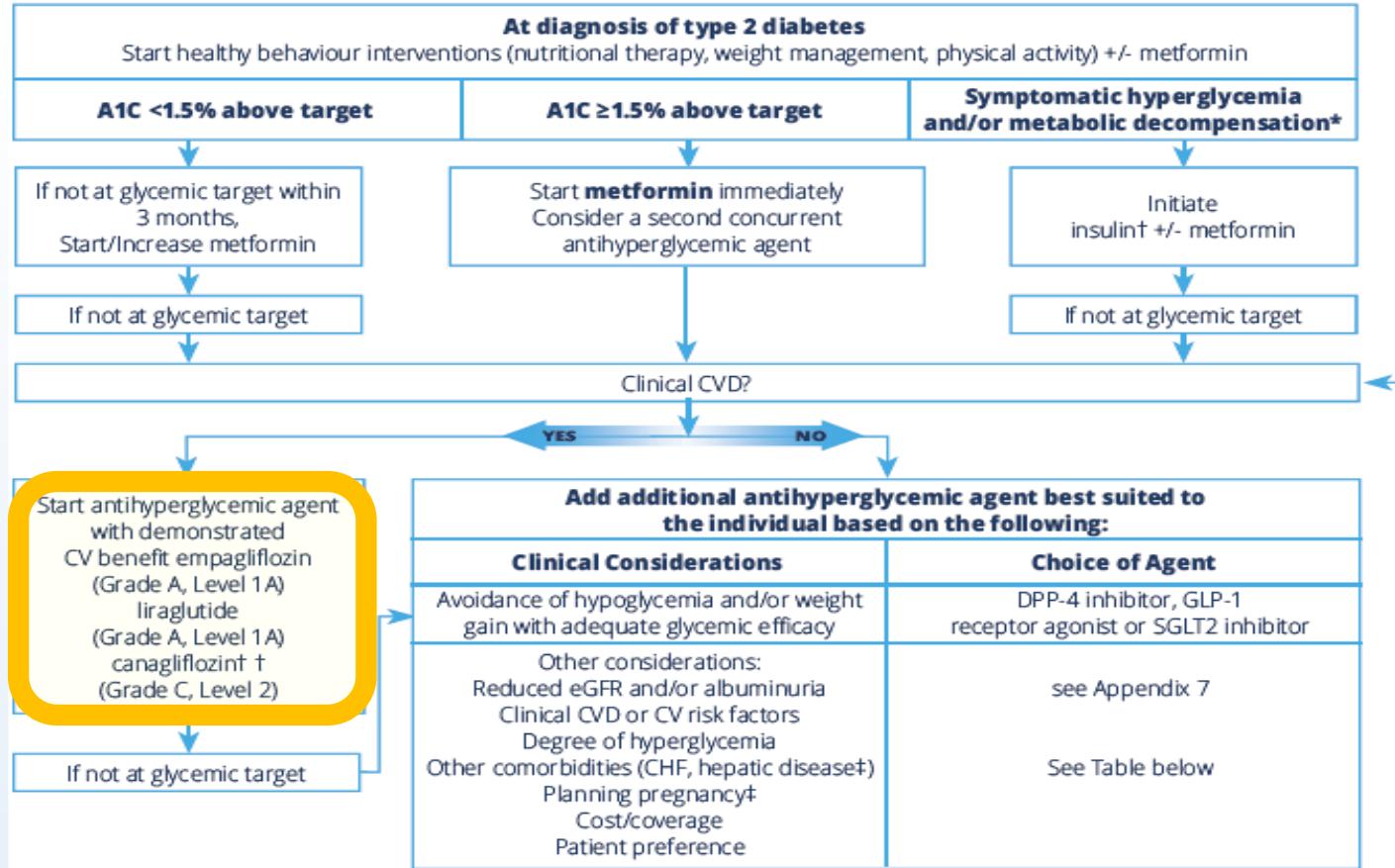


## Quick Reference Guide

**DIABETES  
CANADA**

guidelines.diabetes.ca  
diabetes.ca | 1-800-BANTING (226-8464)

416569-18

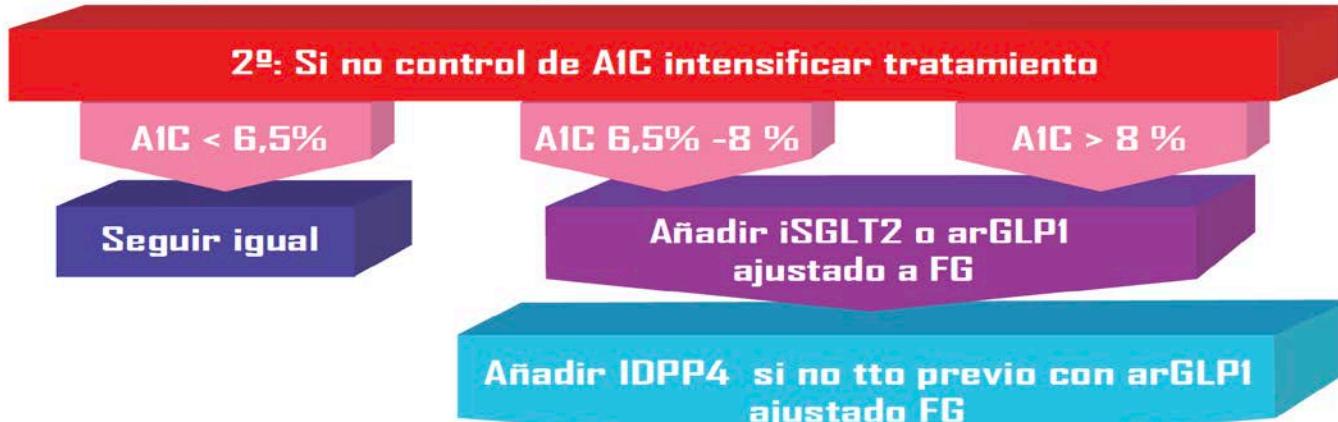


## Tratamiento de la DM2 en prevención secundaria

Tratamiento de la DM2 en prevención secundaria



# Tratamiento de la DM2 en Prevención Secundaria



**Insulina Basal:  
Degludec o Glargina 300  
Insulina prandial.**



SEEN



Sociedad Española  
de  
Endocrinología y Nutrición

# DOCUMENTO DE ABORDAJE INTEGRAL DE LA DIABETES TIPO 2

## GRUPO DE TRABAJO DE DIABETES MELLITUS DE LA SOCIEDAD ESPAÑOLA DE ENDOCRINOLÓGIA Y NUTRICIÓN

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ÓSCAR MORENO-PÉREZ\*  
CRISTINA TEJERA-PÉREZ  
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VIRGINIA BELLIDO-CASTAÑEDA  
MARTÍN LÓPEZ DE LA TORRE CASARES  
PEDRO ROZAS-MORENO  
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AMPARO MARCO MARTÍNEZ  
JAVIER ESCALADA-SAN MARTÍN  
MANUEL GARGALLO-FERNÁNDEZ  
MANUEL BOTANA-LÓPEZ  
JUDITH LÓPEZ-FERNÁNDEZ  
JOSE MIGUEL GONZALEZ-CLEMENTE  
ESTEBAN JÓDAR-GIMENO  
PEDRO MEZQUITA-RAYA

EN REPRESENTACIÓN DEL GRUPO DE DIABETES – SEEN