QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

CVPT-T2D CARDIOVASCULAR PROTECTION TOOL - TYPE 2 DIABETES

LUC TRUDEAU
MD, FRCPC

Coordinator

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

THE QSVS

MISSION:

- Enable interdisciplinary exchanges to optimize the management of vascular diseases.
- Act as a resource for health care professionals:
  - Conventions, conferences, webinars & tools as well as resources for patients.

MEMBERSHIP:

- 2,500 active members
- Free. Voluntary donations are welcome.

- Cardiology
- Vascular surgery
- Endocrinology
- Hematology
- Internal medicine
- Family medicine
- Emergency medicine
- Nephrology
- Neurology
- Obstetrics and gynaecology
- Respirology
- Radiology
- Residents from the specialties listed
- Dietitians/nutritionists
- Pharmacists
- Nursing

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

WHY

CVPT-T2D

Cardio **V**ascular **P**rotection **T**ool for **T**ype **2** **D**iabetes is a working tool for the vascular protection for patients suffering from Type 2 Diabetes.

- The tool is based on a consensus developed in collaboration with a committee of experts to provide better cardiovascular protection to a patient suffering from type 2 diabetes with cardiovascular (CV) risk factors.

- It is a practical tool.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

OBJECTIVES

At the end of the presentation, the participant will:

- Be aware of the importance of providing CV protection to patients with type 2 diabetes with CV risk factors.
- Be able to use the CV Protection Tool for Patients with Type 2 Diabetes to provide better cardiovascular protection to a patient suffering from type 2 diabetes with CV risk factors.
- Understand the basis of the tool.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

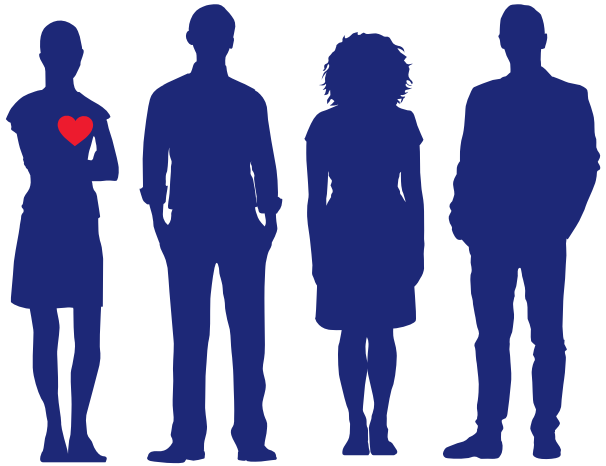
AUTHORS

- These vignettes were created by Dr. Luc Trudeau.
- With the support of the QSVS and by relying on evidence, a committee of experts created the CVPT-T2D:

- Dr. Luc Trudeau Internist	Jewish General Hospital
- Dr. Charles Dussault Cardiologist	Centre Hospitalier Universitaire de Sherbrooke
- Dr. Simon Falardeau Internist	Hôpital Ste-Croix de Drummondville
- Dr. Chantal Godin Endocrinologist	Centre Hospitalier Universitaire de Sherbrooke
- Dr. Jean Grégoire Cardiologist	Montreal Heart Institute
- Dr. Rémi Kouz Cardiologist	Hôpital du Sacré-Coeur de Montréal
- Dr. Eileen O'Meara Cardiologist	Montreal Heart Institute
- Dr Michel Vallée Nephrologist	Hôpital Maisonneuve-Rosemont

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

STATISTICS



- Upon being diagnosed with type 2 diabetes, nearly one out of four patients are already part of the cardiologists' client base, as they already have a coronary heart disease[1].
- 40% to 60% of people with diabetes will die of heart disease[2].
- This is also true for 50% of new cases on dialysis.
- The life expectancy of patients with a CVD and type 2 diabetes is reduced by 11 years[3,4].

-11 years

1 Harris et al. Diabetes Res Clin Pract. 2005;70(1):90-97
2 Association Canadienne du Diabète. Can J Diabetes. 2016;40(6):484-486
3 Di Angelantonio et al. JAMA. 2015;314(1):52-60
4 American Medical Association. JAMA. 2015; doi:10.1001/jama.2015.7008

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

SUMMARY OF STUDIES (1 OUT 2)

STUDIES WITH CLINICAL SUPERIORITY FOR CV PROTECTION

	MAJOR CARDIOVASCULAR EVENTS 3-POINT MACE (Delay before the first occurrence of CV death, non-fatal MI or non-fatal stroke)	CV DEATHS	MORTALITY OF ANY CAUSE	HOSPITALIZATIONS FOR HEART FAILURE
EMPAGLIFLOZIN EMPA-REG	A.R. = ↓1.6% NNT = 62 (3.3 YEARS)	A.R. = ↓2.2% NNT = 45 (3.3 YEARS)	A.R. = ↓2.6% NNT = 38 (3.3 YEARS	A.R. = ↓1.4% NNT = 71 (3.3 YEARS)
CANAGLIFLOZIN CANVAS	A.R. = NOT AVAILABLE C.I. = 0.75-0.97 NNT = 43 (5 YEARS)	A.R. = NOT AVAILABLE NS	A.R. = NOT AVAILABLE NS	A.R. = NOT AVAILABLE C.I. = 0.88 TO 0.87 NNT = 63 (5 YEARS)
DAPAGLIFLOZIN DECLARE-TIMI	A.R. = ↓0.6% NS	A.R. = 0% NS	A.R. = ↓ 0.4% NS	A.R. = ↓0.8% NNT = 125 (4.2 YEARS)
LIRAGLUTIDE LEADER	A.R. = ↓1.9% NNT = 53 (3.8 YEARS)	A.R. = ↓1.3% NNT = 77 (3.8 YEARS)	A.R. = ↓1.4% NNT = 72 (3.8 YEARS)	A.R. = ↓0.6% NS
SEMAGLUTIDE SUSTAIN-6	A.R. = ↓2.3% NNT = 45 (2 YEARS)	A.R. = ↓0.1% NS	A.R. = ↑0.1% NS	A.R. = ↑0.3% NS
DULAGLUTIDE REWIND	A.R. = ↓1.4% NNT = 72 (5.4 YEARS)	A.R. = ↓0.6% NS	A.R.= ↓ 1.2% NS	A.R.= ↓0.3% NS

A.R.= Absolute Risk NNT= Number Needed to Treat NS= Not Significant C.I.= Confidence Interval N.A. = Not available

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

SUMMARY OF STUDIES (2 OUT 2)

STUDIES WITH CLINICAL SUPERIORITY FOR SPECIFIC INDICATIONS

HEART FAILURE

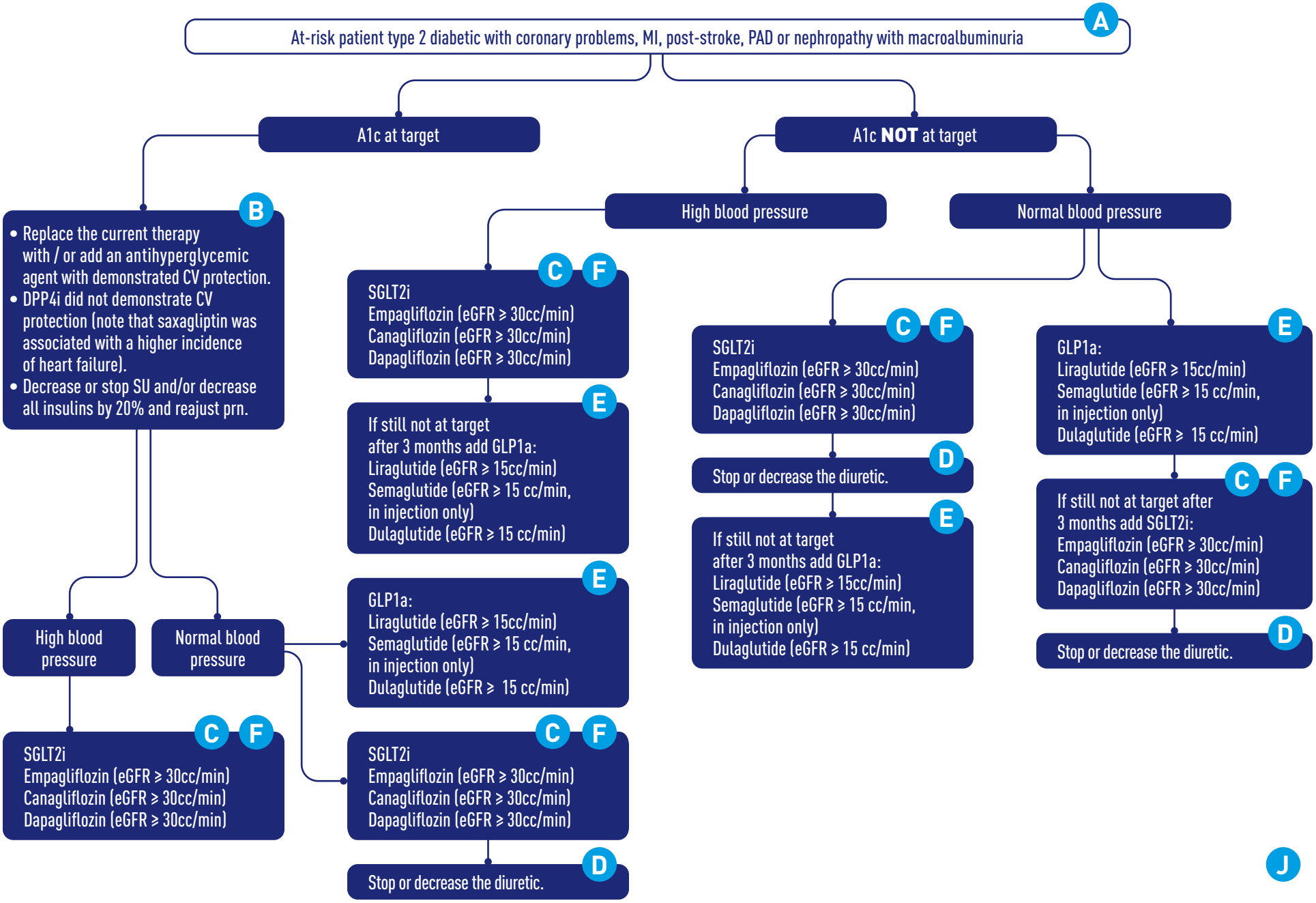
	HOSPITALIZATIONS FOR HEART FAILURE, URGENT VISITS FOR HEART FAILURE OR MORTALITY CV	HOSPITALIZATIONS FOR HEART FAILURE	MORTALITY CV	MORTALITY OF ANY CAUSE
DAPAGLIFLOZIN | DAPA-HF (ejection fraction 40%, 41% of patients were diabetic) Duration: 1.5 years	A.R. = ↓ 4.9% C.I. = 0.65-0.86 NNT = 21	A.R. = ↓ 3.7% C.I. = 0.59-0.83 NNT = 27	A.R. = ↓ 1.9% C.I. = 0.69-0.98 NNT = 53	A.R. = ↓ 2.3% C.I. =0.71-0.97 NNT = 44
	CARDIOVASCULAR MORTALITY OR HOSPITALIZATION FOR HEART FAILURE	**HOSPITALIZATIONS FOR HEART FAILURE**	**MORTALITY CV**	**MORTALITY OF ANY CAUSE**
EMPAGLIFLOZIN | EMPEROR-REDUCED (ejection fraction 40%, 50% of patients were diabetic) Duration: 1.33 years	A.R. = ↓ 5.2% C.I. = 0.65-0.86 NNT = 19	A.R. = ↓ 5.1% C.I. = 0.59-0.81 NNT = 20	A.R. = ↓ 0.8% C.I. = 0.75-1.12 NS	A.R. = ↓ 0.8% C.I. = 0.77-1.10 NS

DIABETIC NEPHROPATHY

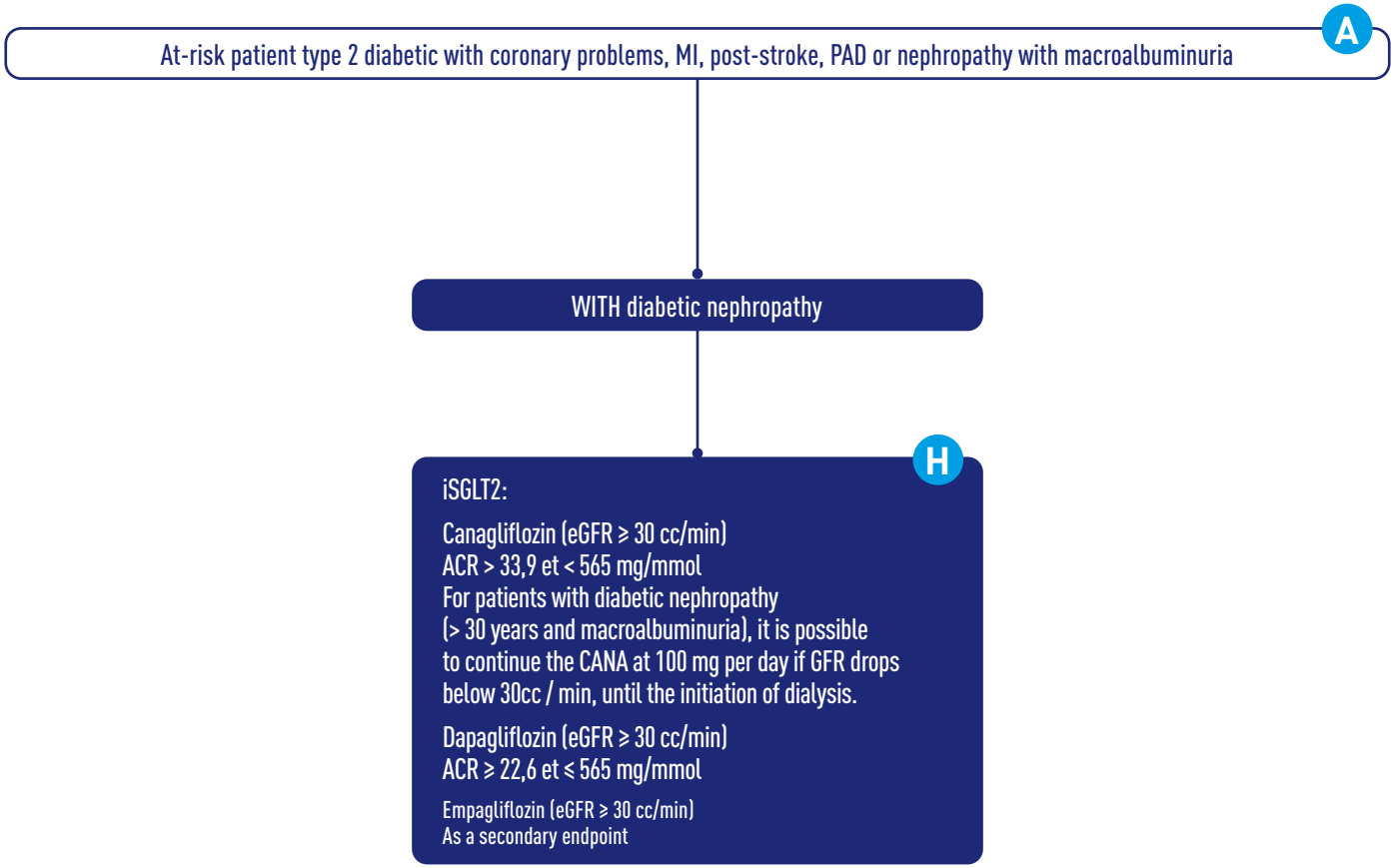
	TERMINAL RENAL FAILURE OR DOUBLING OF PLASMA CREATININE OR RENAL CAUSE MORTALITY OR VC	END-STAGE RENAL FAILURE, DOUBLING OF CREATININE OR RENAL DEATH	3-POINT MACE	MORTALITY OF ANY CAUSE
CANAGLIFLOZIN | CREDENCE (eGFR ⩾ 30 cc/min and ACR › 33.9 and ⩽ 565 mg/mmol) Duration: 2.62 years	↓ A.R. = 4.4% C.I. = 0.59-0.82 NNT = 22	↓ A.R. = 3.3% C.I. = 0.53-0.81 NNT = 28	↓ A.R. = 2.3% C.I. = 0.67-0.95 NNT = 40	↓ A.R. = 1.5% C.I. = 0.68-1.02 NNT: NA
	EGFR ⩾ 50% OR KIDNEY FAILURE TERMINAL OR MORTALITY KIDNEY CAUSE OR CV	**↓EGFR ⩾ 50%**	**END-STAGE RENAL DISEASE**	**MORTALITY OF ANY CAUSE**
DAPAGLIFLOZIN | DAPA-CKD (eGFR ⩾ 25 cc/min and ACR ⩾ 22.6 and ⩽ 565 mg/mmol) Duration: 2.4 years	A.R. = ↓ 5.3% C.I. = 0.51-0.72 NNT = 19	A.R. = ↓ 4.1% C.I. = 0.42-0.67 NNT = 25	A.R. = ↓ 2.4% C.I. = 0.50-0.82 NNT = 42	A.R. = ↓ 2.1% C.I. = 0.53-0.88 NNT = 48

A.R.= Absolute Risk NNT= Number Needed to Treat NS= Not Significant C.I.= Confidence Interval N.A. = Not available

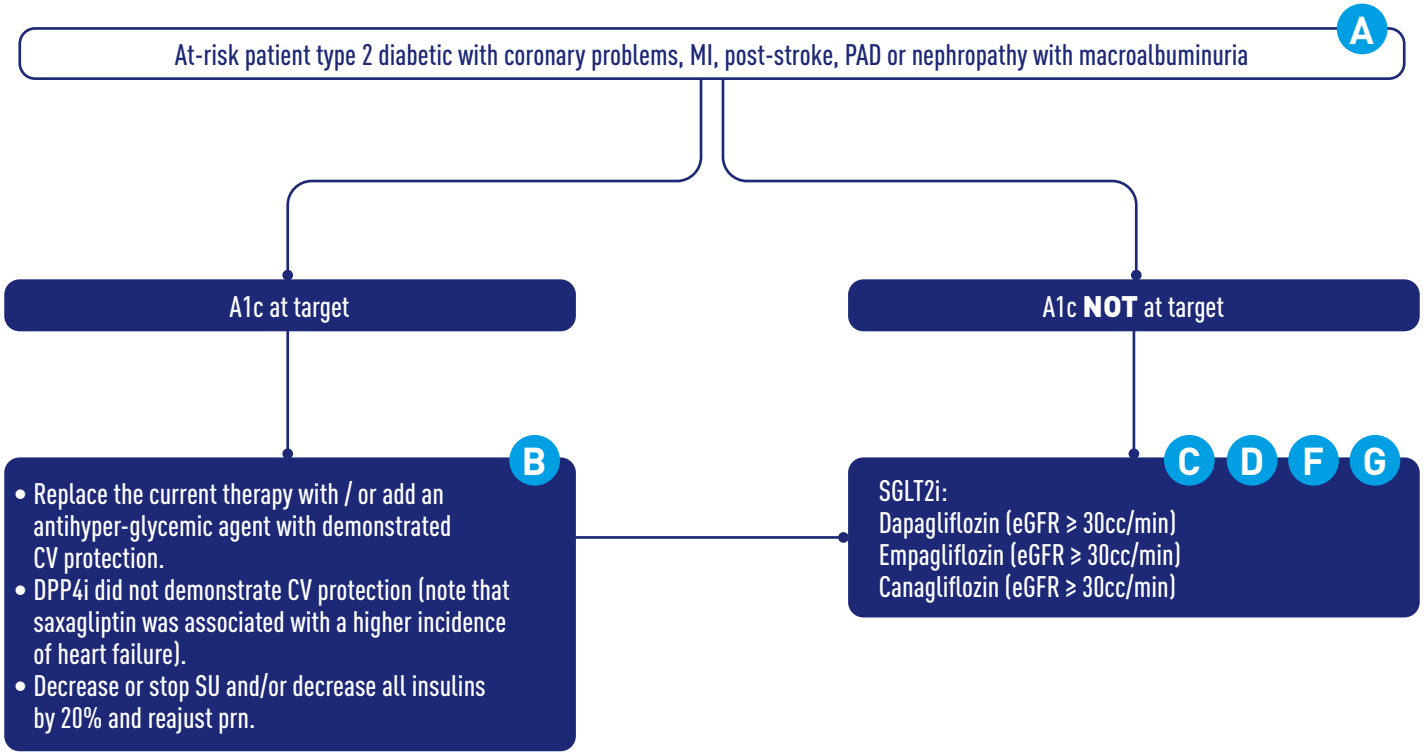
AT-RISK TYPE 2 DIABETIC TREATMENT ALGORITHM CV WITHOUT HEART FAILURE



AT-RISK TYPE 2 DIABETIC TREATMENT ALGORITHM CV WITH DIABETIC NEPHROPATHY



AT-RISK TYPE 2 DIABETIC TREATMENT ALGORITHM CV WITH HEART FAILURE (EF ⩽ 40%)



QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

DAVID

- 78 years of age.
- Semi-independent at home due to intermittent claudication. History of hypertension, type 2 diabetes and hypercholesterolemia.
- Medications : metformine 500 mg bid, AAS 80 mg o.d., sitagliptine 50 mg o.d., perindopril 4 mg/indapamide 1.25 mg o.d. and rosuvastatin 20 mg o.d.
- ABI = 0.75, BP 142/76, pulse at 78/min, A1C = 6.5%, LDL-C = 2.2, BMI = 28, eGFR = 48 ml/min, normal ACR.

Can we optimize this patient's CV protection?

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

DAVID

At Risk Type-2 Diabetes Patient — A

WITHOUT heart failure

A1c AT target

- Replace the current therapy with / or add an antihyperglycemic agent with demonstrated CV protection.
- DPP4i did not demonstrate CV protection (note that saxagliptin was associated with a higher incidence of heart failure).
- Decrease or stop SU and/or decrease all insulins by 20% and reajust prn. — B

High blood pressure

SGLT2i:
Empagliflozin (eGFR ≥ 30 cc/min)
Canagliflozin (eGFR ≥ 30 cc/min)
Dapagliflozin (eGFR ≥ 30 cc/min) — C

A

Definition of a at risk Type-2 diabetic patient:

- *Type 2 diabetics in secondary prevention (post-MI, stroke, symptomatic PAD);*
- *≥ aged 50 with stage 3 or higher CKD or at least grade II chronic heart failure;*
- *≥ aged 60 with at least one risk factor for CV disease (proteinuria, HBP, LVH, systolic or diastolic dysfunction,ankle brachial index < 0.9).*
- *Diabetic nephropathy: more than 30 years, GFR 30-90 ml/min, urinary ACR of 34 to 565 mg/mmol.*
- *Definition of nephropathy WITH macroalbuminuria: (Patients already treated with iECA or ARA) ACR: urine albumin / creatinine ratio*

B

- *Inzucchi and al.,Improvement in Cardiovascular Outcomes With Empagliflozin Is Independent of Glycemic Control. Circulation 2018, 138:1904-1907.*
- *Scirica and al. SAVOR-TIMI 53. NEJM 2013, 369;14: 1317-1326.*
- *The following studies suggest an increased risk of CV events with the use of a sulfonylurea:*
  - *JM Evans et al. Diabetologia 2006;49:930-936.*
  - *M Monami and al. Diabetes Obes Metab 2013;15:938-53.*

C

- *Average decrease in SBP:*
  -3.5 mmHg (EMPA-REG),
  -4 mmHg (CANVAS),
  -2.7 mmHg (DECLARE-TIMI)
  - *Zinman et al. EMPA-REG OUTCOME. NEJM. 2015; 373: 2117-28.*
  - *Neal et al. CANVAS. NEJM. 2017; 377: 644-657.*
  - *Wiviott et al. DECLARE-TIMI.NEJM. 2019: 380: 347-57*

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

SOPHIE

- 50 years of age.
- Type 2 diabetes for 5 years. First myocardial infarction 1 year ago. History of hypertension and hypercholesterolemia.
- Medications: metformine 500 mg bid (intolerance to SUs), ASA 80 mg o.d., rosuvastatin 20 mg o.d., irbesartan 300 mg o.d.
- BP 122/76, pulse at 60/min, A1C= 8.1%, LDL-C= 1.8, BMI=33, eGFR = 85 ml/min, normal ACR.

Can we optimize this patient's CV protection?

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

SOPHIE

At-Risk Type-2 Diabetes Patient — A

WITHOUT heart failure

A1c NOT at target

Normal blood pressure

SGLT2i — C
Empagliflozin (eGFR ≥ 30cc/min)
Canagliflozin (eGFR ≥ 30 cc/min)
Dapagliflozin (eGFR ≥ 30cc/min)

Stop or decrease the diuretic. — D

If still not at target after 3 months add GLP1a: — E
Liraglutide (eGFR ≥ 15cc/min)
Semaglutide (eGFR ≥ 15 cc/min, in injection only)
Dulaglutide (eGFR ≥ 15 cc/min)

GLP1a: — E
Liraglutide (eGFR ≥ 15cc/min)
Semaglutide (eGFR ≥ 15 cc/min, in injection only)
Dulaglutide (eGFR ≥ 15 cc/min)

If still not at target after 3 months add SGLT2i: — C
Empagliflozin (eGFR ≥ 30cc/min)
Canagliflozin (eGFR ≥ 30cc/min)
Dapagliflozin (eGFR ≥ 30cc/min)

Stop or decrease the diuretic. — D

A

Definition of a at risk Type-2 diabetic patient:

- *Type 2 diabetics in secondary prevention (post-MI, stroke, symptomatic PAD);*
- *≥ aged 50 with stage 3 or higher CKD or at least grade II chronic heart failure;*
- *≥ aged 60 with at least one risk factor for CV disease (proteinuria, HBP, LVH, systolic or diastolic dysfunction,ankle brachial index < 0.9).*
- *Diabetic nephropathy: more than 30 years, GFR 30-90 ml/min, urinary ACR of 34 to 565 mg/mmol.*
- *Definition of nephropathy WITH macroalbuminuria: (Patients already treated with iECA or ARA) ACR: urine albumin / creatinine ratio*

C

- *Average decrease in SBP:*
  -3.5 mmHg (EMPA-REG),
  -4 mmHg (CANVAS),
  -2.7 mmHg (DECLARE-TIMI)
  - *Zinman et al. EMPA-REG OUTCOME. NEJM. 2015; 373: 2117-28.*
  - *Neal et al. CANVAS. NEJM. 2017; 377: 644-657.*
  - *Wiviott et al. DECLARE-TIMI.NEJM. 2019: 380: 347-57*

D

- *Stop or decrease the diuretic.*
- *Please refer to the graphic page 25*
  - *D Cherney and J Udell, Circulation. 2016; 134:1915-1917.*

E

- *Average drop in SBP:*
  -1 mmHg (LEADER),
  -1 to -3 mmHg (SUSTAIN-6)
  -3 mmHg (REWIND)

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

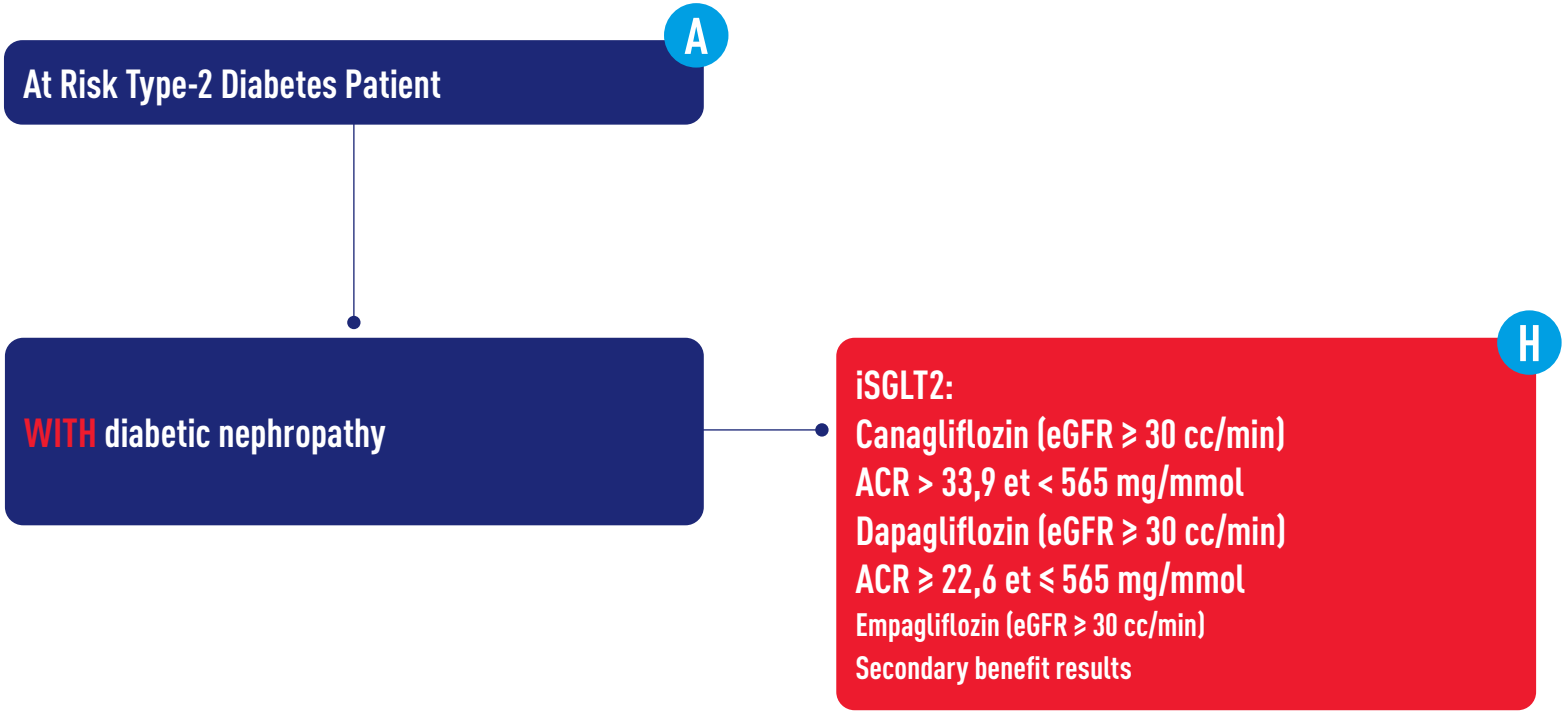
AGNES

- 64 years of age.
- Myocardial infarction 6 months ago. Two vascular stents installed. 45% ejection fraction. Known type 2 diabetes and hypertension for 10 years.
- Medications : metformine 500 mg bid, glyburide 5 mg bid, saxagliptin 5mg o.d., atorvastatin 40 mg o.d., metoprolol 50 mg bid, ramipril 10 mg o.d., ASA 80 mg o.d. and ticagrelor 90 mg bid.
- BP 136/82, pulse at 72/min, A1C = 5.9%, LDL-C = 1.9, BMI = 27, eGFR = 80 cc/min, but ACR high at 42 mg/mmol.

Can we optimize this patient's CV protection?

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

AGNES



A

Definition of a at risk Type-2 diabetic patient:

- *Type 2 diabetics in secondary prevention (post-MI, stroke, symptomatic PAD);*
- *⩾ aged 50 with stage 3 or higher CKD or at least grade II chronic heart failure;*
- *⩾ aged 60 with at least one risk factor for CV disease (proteinuria, HBP, LVH, systolic or diastolic dysfunction,ankle brachial index < 0.9).*
- *Diabetic nephropathy: more than 30 years, GFR 30-90 ml/min, urinary ACR of 34 to 565 mg/mmol.*
- *Definition of nephropathy WITH macroalbuminuria: (Patients already treated with iECA or ARA) ACR: urine albumin / creatinine ratio*

H

- *In diabetic patients with chronic renal failure (eGFR of 30 < 60 cc / min) and macroalbuminuria (ACR > 34 à 565 mg/mmol), the CREDENCE study demonstrated a decrease in renal events as a primary outcome with the addition of canagliflozin 100 mg daily.*
- *The DAPA-CKD study also carried out in diabetic patients with chronic renal failure (eGFR of 25 <75 cc / min) and macroalbuminuria (ACR> 23 to 565 mg / mmol) also demonstrated a decrease in renal events as the primary outcome with the addition of dapagliflozin 10 mg daily.*
- *Empagliflozin and aGLP1 have demonstrated this advantage as a secondary endpoint.*

  - *Zinman and al. EMPA-REG OUTCOME. NEJM. 2015; 373:2117-28.*
  - *Marso and al. LEADER. NEJM. 2016; 375:311-22.*
  - *Marso and al. SUSTAIN-6. NEJM. 2016;375:1834-44.*
  - *Neal and al. CANVAS. NEJM. 2017; 377:644-657.*
  - *Perkovic and al. CREDENCE. NEJM. 2019; 380:2295-2306.*
  - *Gerstein and al. REWIND. Lancet. 2019;394:121-30.*
  - *Heerspink and al, DAPA-CKD, N Engl J Med 2020; 383:1436-1446.*

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

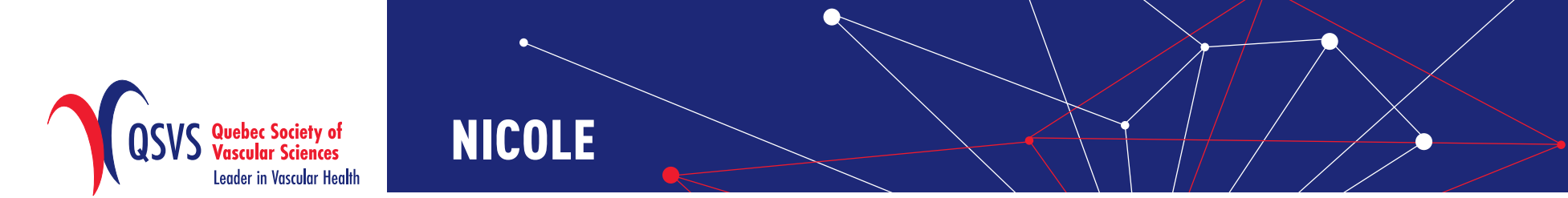
NICOLE

- 60 years of age.
- History of type 2 diabetes, hypercholesterolemia, sleep apnea syndrome (CPAP at night) and heart failure with 35% ejection fraction, but no lesion on angiogram.
- Medications : metformine 1000 mg bid, gliclazide 60 mg o.d. and liraglutide 1.2 mg sc o.d., atorvastatin 10 mg o.d., olmesartan 10 mg o.d.
- BP 150/94; pulse at 60/min. A1C = 7.8%, LDL-C = 2.8, BMI = 32, eGFR = 45 ml/min, ACR = 28 mg/mmol.

Can we optimize this patient's CV protection?

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

NICOLE



A

Definition of a at risk Type-2 diabetic patient:

- *Type 2 diabetics in secondary prevention (post-MI, stroke, symptomatic PAD);*
- *≥ aged 50 with stage 3 or higher CKD or at least grade II chronic heart failure;*
- *≥ aged 60 with at least one risk factor for CV disease (proteinuria, HBP, LVH, systolic or diastolic dysfunction, ankle brachial index < 0.9).*
- *Diabetic nephropathy: more than 30 years, GFR 30-90 ml/min, urinary ACR of 34 to 565 mg/mmol.*
- *Definition of nephropathy WITH macroalbuminuria: (Patients already treated with iECA or ARA) ACR: urine albumin / creatinine ratio*

C

- *Average decrease in SBP:*
  -3.5 mmHg (EMPA-REG),
  -4 mmHg (CANVAS),
  -2.7 mmHg (DECLARE-TIMI)
  - *Zinman et al. EMPA-REG OUTCOME. NEJM. 2015; 373: 2117-28.*
  - *Neal et al. CANVAS. NEJM. 2017; 377: 644-657.*
  - *Wiviott et al. DECLARE-TIMI.NEJM. 2019: 380: 347-57*

D

- *Stop or decrease the diuretic.*
- *Please refer to the graphic page 25*
  - *D Cherney and J Udell, Circulation. 2016; 134:1915-1917.*

F

- *SGLT2i can lower BP further.*
- *This class of drugs can also increase diuresis.*
- *Consider reducing the dose of diuretic if the patient is at his/her baseline blood volume (Cherney et al.).*

G

- *In diabetic patients with reduced ejection fraction (≤ 40%), the DAPA-HF and Emperor-Reduced studies demonstrated a decrease in episodes of heart failure as a main endpoint with the addition of dapagliflozin and empagliflozin with 10 mg daily.*
- *Empagliflozin and Canagliflozin demonstrated this advantage as a secondary endpoint.*
  - *Zinman and al. EMPA-REG OUTCOME. NEJM. 2015; 373: 2117-28.*
  - *Neal and al. CANVAS. NEJM. 2017 377: 644-657.*
  - *McMurray and al. DAPA-HF. NEJM. 2019; 381:1995-2008*
  - *Packer and al, EMPEROR-Reduced, N Engl J Med 2020; 383:1413-1424*

At Risk Type-2 Diabetes Patient (A)

WITH heart failure (EF <40%)

SGLT2i: (C D F G)
Dapagliflozin (eGFR ≥ 30 cc/min)
Empagliflozin (eGFR ≥ 30 cc/min)
Canagliflozin (eGFR ≥ 30 cc/min)

For maximum CV protection, Nicole's BP will be kept at <130/80 mm Hg, LDL-C at <2.0 mmol / L and A1c ≤ 7.0%.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

PRESCRIBING CONSIDERATIONS

When a treatment recommendation is displayed, you can click on your treatment choice to access Prescribing Considerations.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

PRESCRIBING CONSIDERATIONS

USE OF SGLT2I

Common side effects:

- Mycotic infections
  - Vaginitis and balanitis (topical application of an antifungal or fluconazole p.o.).
- Increased urinary frequency with recommendation to stay well hydrated:
  - Advise the patient to increase his/her fluid intake, e.g., water, by at least 250ml/day.
  - If concomitant use of a diuretic, lowering the dose of diuretic is suggested.
- Weight loss
- Application of SADMAN

Identify the risk factors for euglycemic ketoacidosis

(L Zhang, M Tamilia, CMAJ, June 25, 2018, 190 (25) pE766:

- Period of prolonged fasting (e.g., surgery).
- Latent autoimmune diabetes of the adult.
- Stop or reduce insulin/insulin deficiency.
- Severe dehydration.
- Low carbohydrate intake.
- Excessive alcohol consumption.

Insulin

- Lower the insulin dose by at least 20% with close blood sugar monitoring.

Follow-up

- Test creatinine and plasma electrolyte levels in the months after introducing SGLT2i.

Dosage

Empagliflozin (Jardiance®): 10mg DIE (if eGFR ≥30cc/min) with or without food. Increase to 25mg DIE after 1 month if necessary. Canagliflozin (Invokana®): 100mg DIE BEFORE the 1st meal of the day, with or without food. Increase to 300mg DIE after 1 month if necessary. Only the 100 mg dose is allowed if eGFR between 30 and 45cc / min. For patients with diabetic nephropathy (> 30 years and macroalbuminuria), it is possible to continue the CANA at 100 mg per day if GFR drops below 30cc / min, until the initiation of dialysis.Dapagliflozin (Forxiga®): 5 mg DIE (if eGFR ≥ 30cc / min) with or without food. Increase to 10mg DIE if necessary if 5mg is well tolerated. (The DAPA-HF study used the 10mg dose daily).

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

PRESCRIBING CONSIDERATIONS

USE OF GLP1A

Common side effects:

- Nausea/vomiting and diarrhea.
- Acute biliary disease.
- Weight loss.
- Possibility of pancreatitis (pre-clinical trials)

Insulin

- Lower the insulin dose by at least 20% with close blood sugar monitoring

Dosage

Liraglutide (Victoza®): injection of 0.6 mg DIE for 1 week. When well-tolerated, 1.2mg DIE. If necessary, 1.8mg DIE. With or without food. Injected subcutaneously in the abdomen, thigh, or upper arm. Provide education for injection.

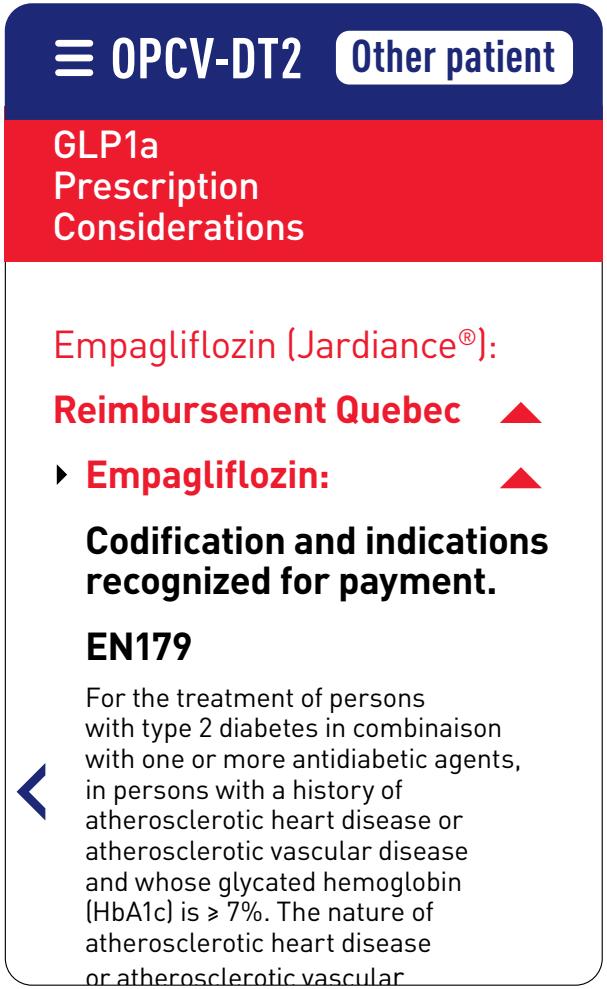
Semaglutide (Ozempic®): Injection 0.25 mg once/week (not therapeutic dose). After 4 weeks, 0.5 mg once/week. If blood sugar is still not controlled after 4 weeks, 1 mg once/week. With or without food. Provide education for injection.

Dulaglutide (Trulicity®):Injection of 0.75mg once/week. The dose may be increased to a maximum of 1.5 mg once/week if necessary. With or without meals. Inject subcutaneously into the abdomen, thigh or upper arm. Give teaching for injection.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

PRESCRIBING CONSIDERATIONS

Also, depending on the province you chose when you opened your App, you will find the coverage criteria and the coverage codes, if applicable, for the respective province.



QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

CONCLUSION

- The treatment of type 2 diabetes proposes a change: choosing a therapy based on its ability to prevent cardiovascular (CV) events.
- Depending on the associated clinical conditions, patients with type 2 diabetes may benefit more from one or more strategies for increased CV protection.
- In addition to glycemic control and CV protection, the new antihyperglycemic molecules are associated with a decrease in weight and blood pressure.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

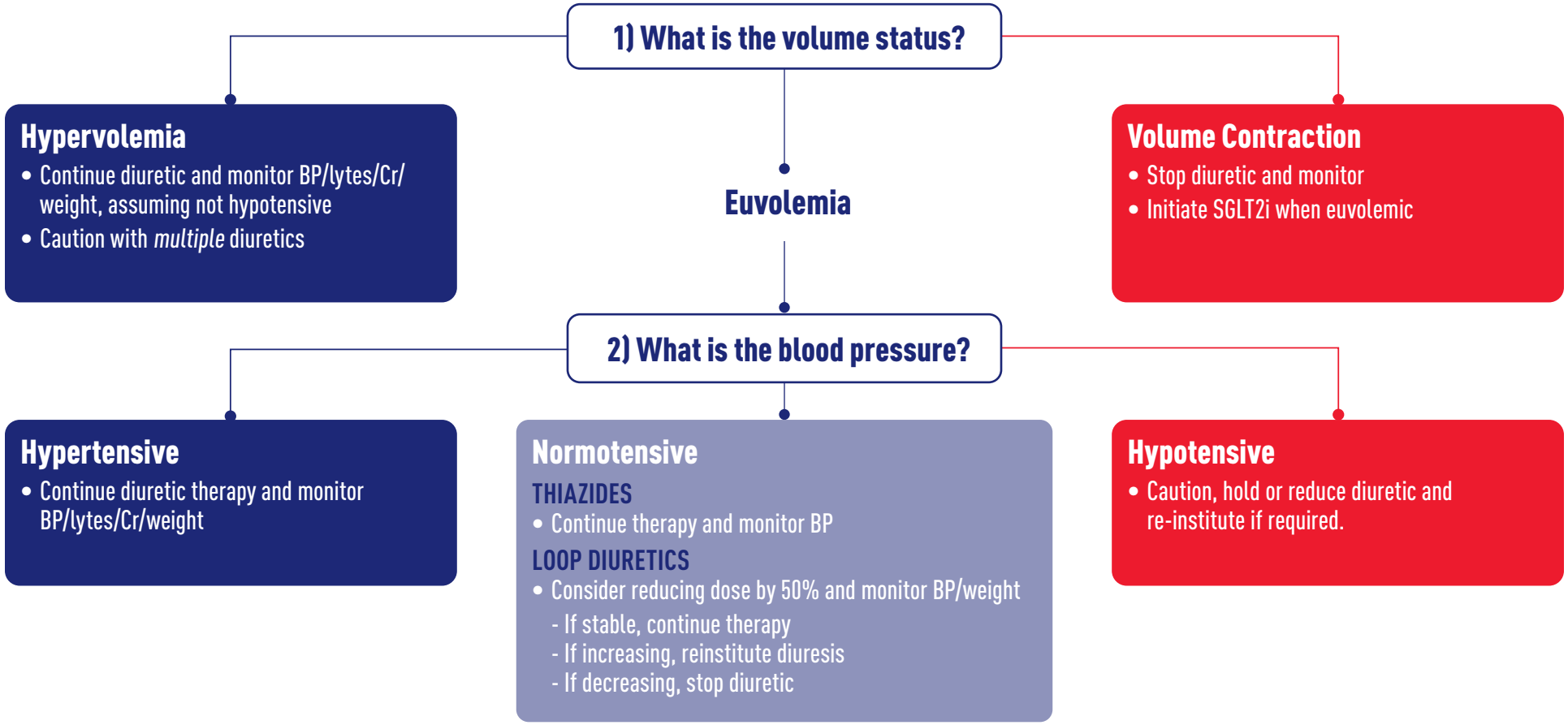


Figure adapted Cherney DZ et al, Circulation. 2016;134(24):1915-1917. Proposed management of concomitant diuretics when initiating a sodium glucose cotransport-2 inhibitor (SGLT2i) in high-risk patients with type 2 diabetes mellitus (T2DM).

Dark blue boxes represent scenarios in which the practitioner can typically proceed with initiation of SGLT2i therapy among stable outpatients with T2DM. Red boxes represent scenarios in which the practitioner should not initiate SGLT2i therapy given the potential for deleterious natriuresis/hemodynamic effects in these settings. Light blue boxes represent scenarios in which the practitioner may proceed with caution with initiation of ISGLT2i therapy and monitor for natriuresis/hemodynamic effect. Clinical monitoring includes consideration of checking blood pressure (BP), renal function, electrolytes, and weight response to therapy within the first 2 weeks. Similar recommendations may be applicable in patients taking angiotensin II receptor-neprilysin inhibition (ARNI) therapy, and additional data on SGLT2i-ARNI combinations are required. Cr indicates creatinine.

QSVS Quebec Society of Vascular Sciences
Leader in Vascular Health

THE TOOL

The CVPT-T2D can be found on the following platforms:

- **App:**
  - CVPT-T2D
  - Apple iOS App Store or Google Play Store for cell phones and tablets

- **Microsite:**
  - http://cvptt2d.ssvq.org

- **Interactive PDF format:**
  - The QSVS's website: http://cvptt2d.ssvq.org

- **If you liked this tool, a voluntary contribution would be appreciated.**