Diabetes: diagnosis

Decide which glucose test to do:

❶ · If patient is well and able to return for screening, check *fasting/plasma* glucose after an 8-hour overnight fast. If patient is pregnant and well, ❷ interpret result →95.
· Only check ❸ finger prick *random* glucose if patient is unwell or has symptoms of diabetes (thirst, urinary frequency, weight loss) or is unable to return easily for fasting glucose.

Random glucose < 6.1mmol/L

Random glucose 6.1–11mmol/L

Random glucose > 11mmol/L ❹

❺ Check if patient has risk factors:
BMI ≥ 25 *and* 1 or more of:
· Hypertension
· Cardiovascular disease
· Physical inactivity
· Family history diabetes
· High risk ancestry
· Previous gestational diabetes or big baby
· Previous impaired glucose tolerance or impaired fasting glucose

No

Yes

❻ Recheck glucose 3–5 yearly once over 45 years.

❼ Yes

❽ · Assess and manage CVD risk →68.
❾ · Repeat fasting glucose after 3 years, or if CVD or hypertension, 1 year.

< 6.1mmol/L

❿ glucose after

Check if patient needs urgent attention: ❷⓿
· Drowsiness   · Temperature ≥ 38°C
· Confusion   · Unconsciousness →3
· Nausea and/or vomiting   · Chest pain →17
· Abdominal pain
· Rapid deep breathing
· Dehydration: dry mucous membranes, poor skin turgor, sunken eyes, BP < 90/60, pulse ≥ 100

Yes

No

Check urine for ketones.

Ketones present

No ketones

❷③ · Give sodium chloride 0.9% 1L IV over 2 hours then 1L 4 hourly.
· Refer urgently.

Check for symptoms of diabetes: thirst, urinary frequency, weight loss

Yes

No ❷①

⓫ Check fasting plasma glucose after an 8-hour fast.

< 7.8mmol/L

⓬ · Patient has impaired fasting glucose
· Do an oral glucose tolerance test[1]

6.1–6.9mmol/L

7.8–11mmol/L Impaired glucose tolerance

> 6.9mmol/L

⓭ · Assess and manage CVD risk →68.
⓮ · Repeat fasting glucose after 1 year.

⓯ > 11mmol/L

⓰ Confirm with another test: fasting glucose or if available, HbA₁c.

⓱

⓲

Fasting glucose ≤ 6.9mmol/L

Fasting glucose > 6.9mmol/L or HbA₁c ≥ 6.5%

HbA₁c < 6.5%

Discuss with specialist.

Diagnose diabetes

⓲ Fasting glucose > 6.9mmol/L or HbA₁c ≥ 6.5%

⓳ · Refer if < 35 years as type 1 diabetes more likely.
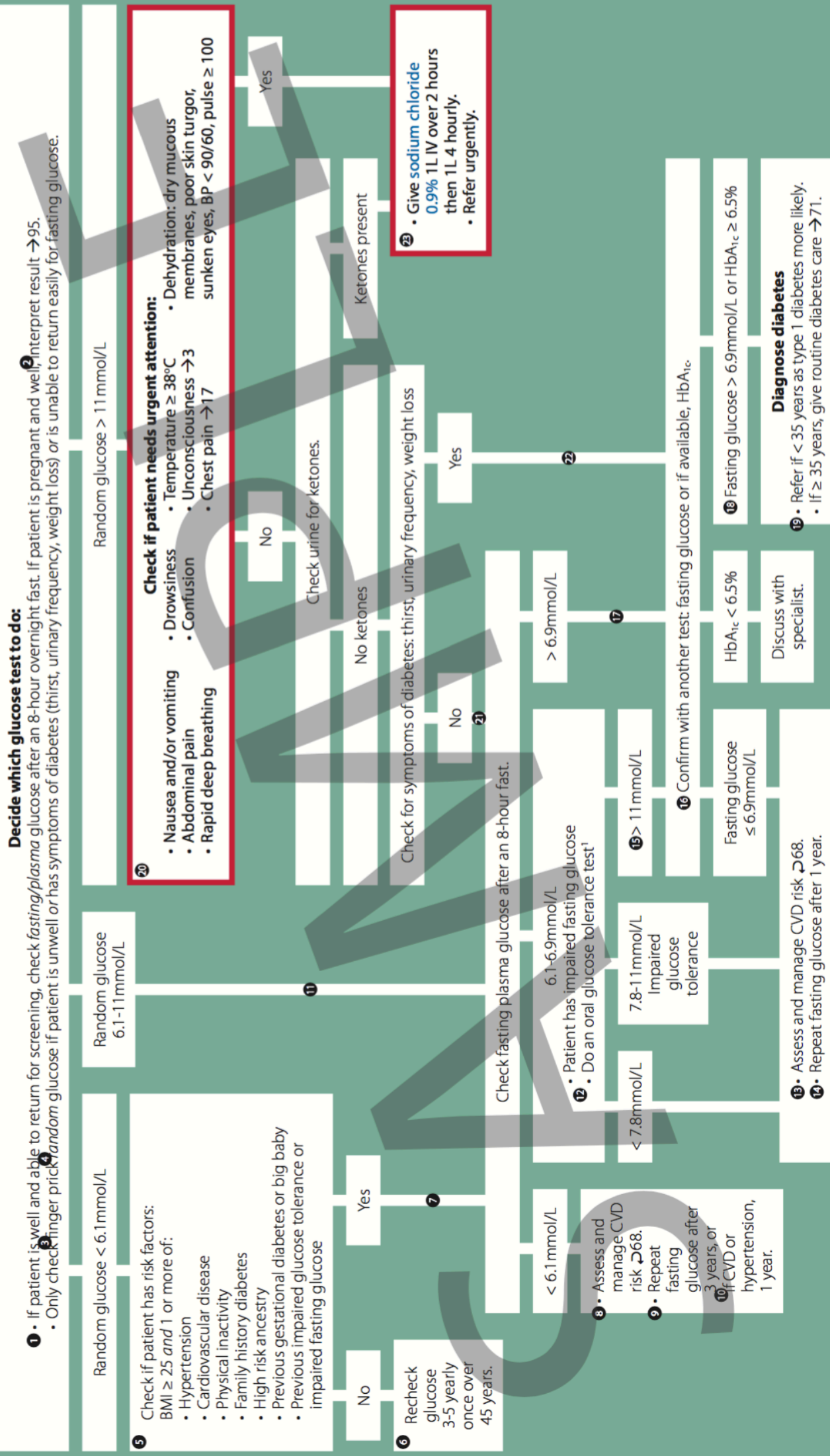· If ≥ 35 years, give routine diabetes care →71.

[1] Do an oral glucose tolerance test after an 8-hour fast, give 75g oral glucose in 250mL water to drink and check glucose 2 hours later.

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