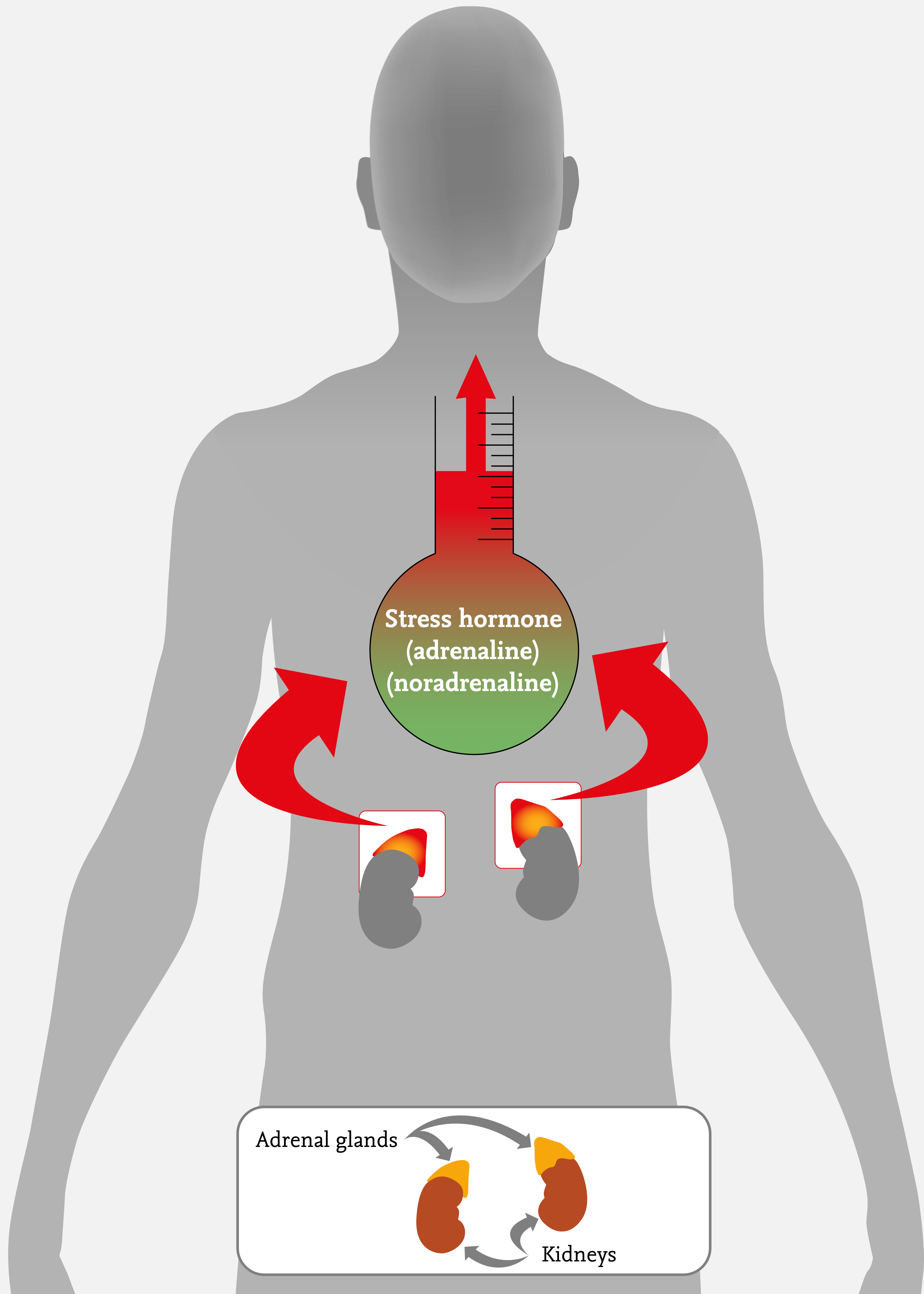


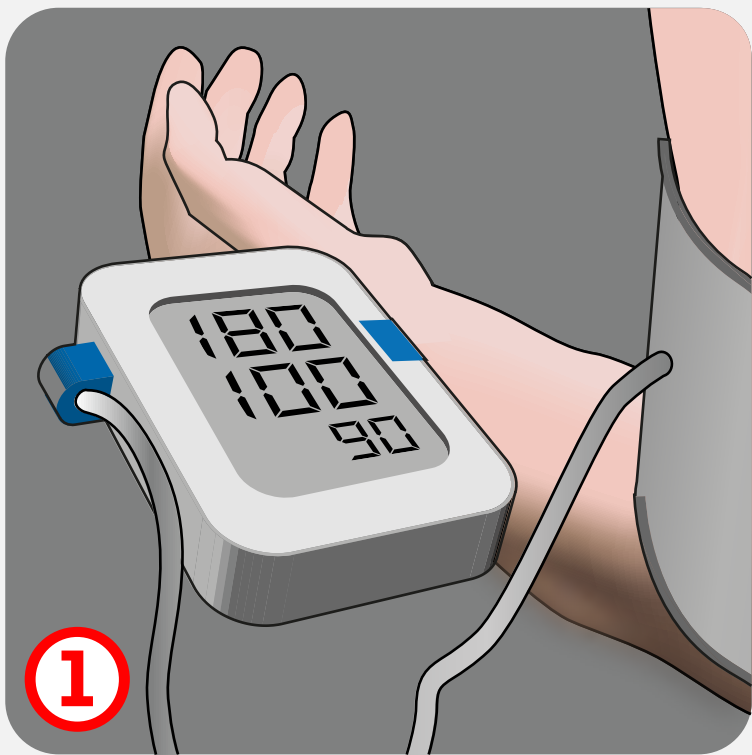
What is pheochromocytoma?

A pheochromocytoma is a tumour of the adrenal gland tissue which produces too much stress hormone (adrenaline and noradrenaline)



What are the consequences of pheochromocytoma?

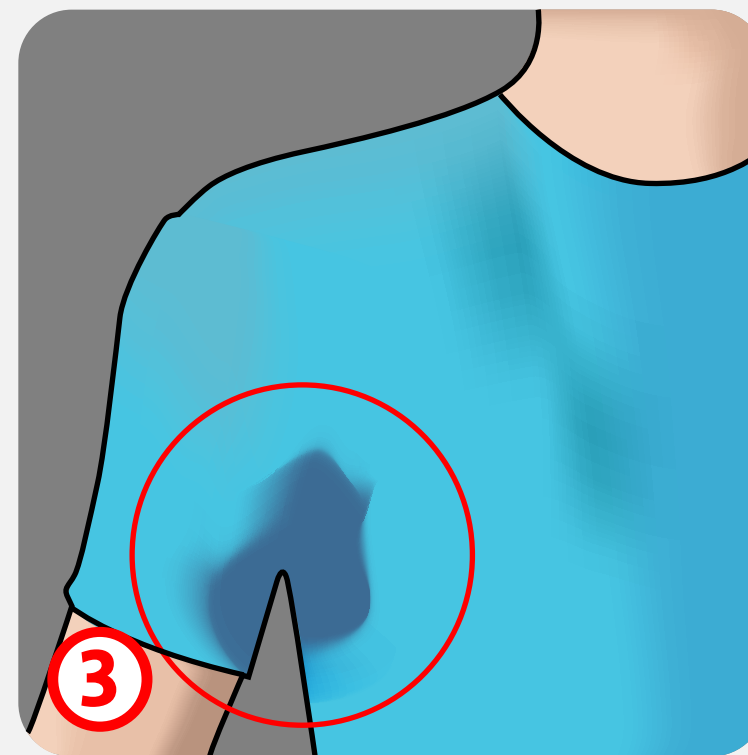
- ▶ Intermittent symptoms due to overproduction of stress hormones
- ▶ Symptoms due to pressure of the tumour on the surrounding tissues



1 High blood pressure.



2 Headache.



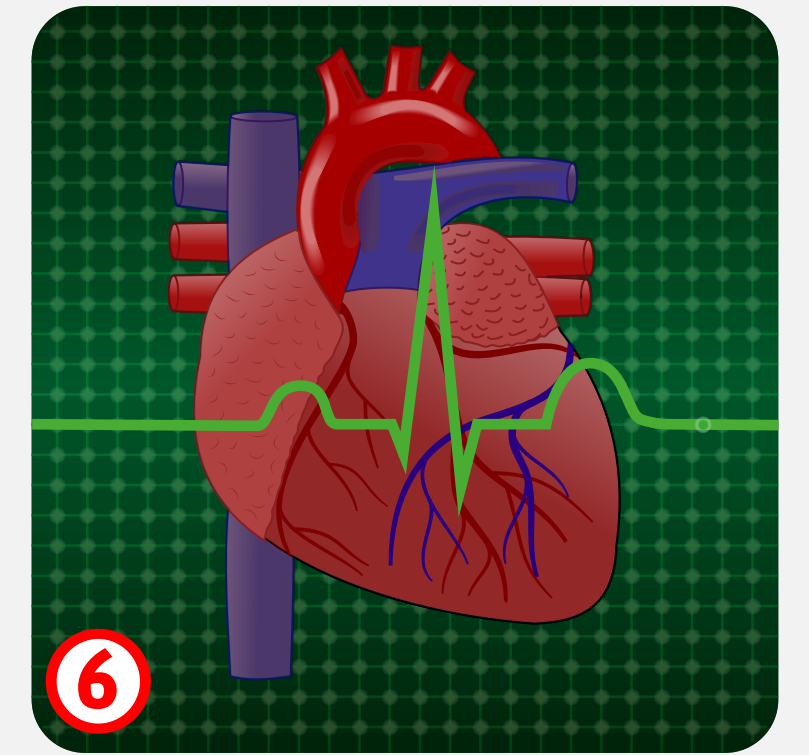
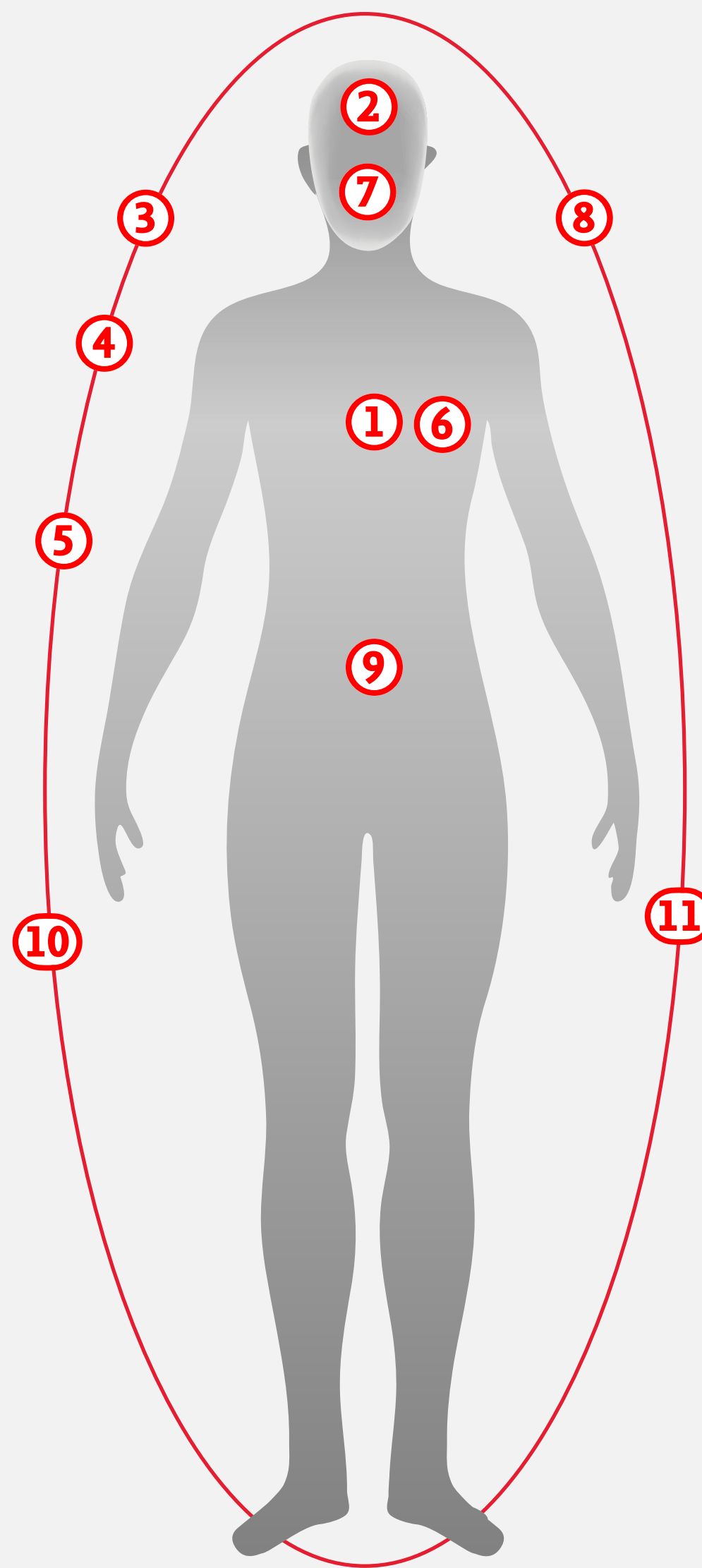
3 Excessive sweating.



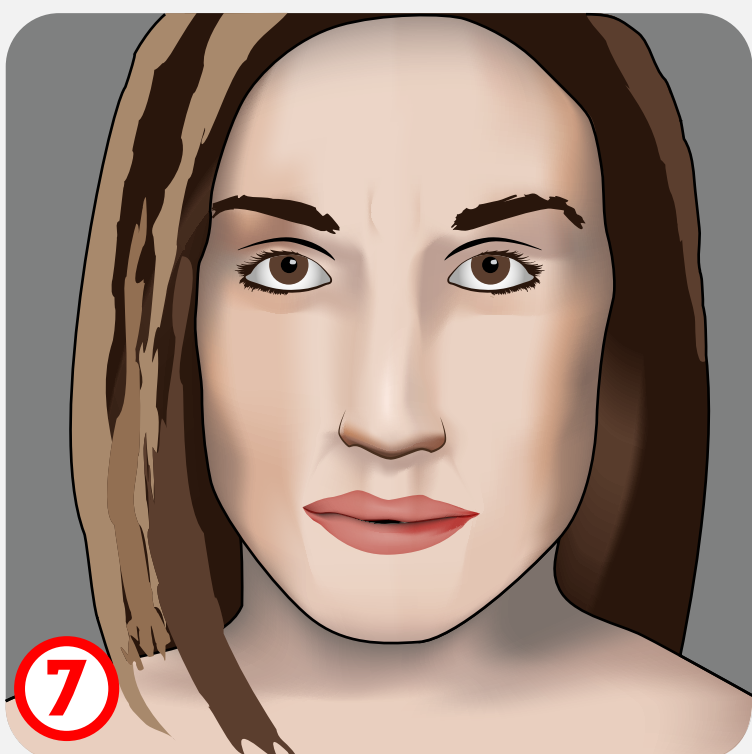
4 Hot flushes.



5 Shaking.



6 Heart palpitations.



7 Paleness.



8 Anxiety/panic.



9 Nausea, vomiting, abdominal pain.



10 Weight loss.



11 Tiredness.

How is pheochromocytoma diagnosed?

Symptoms

- ▶ High blood pressure
- ▶ Hot flushes
- ▶ Heart palpitations
- ▶ Paleness
- ▶ and more

[SEE CONSEQUENCES OF PHEOCHROMOCYTOMA](#)

Family doctor

No pheochromocytoma.

Family doctor carries out examination and may refer the patient to a specialist on the basis of the symptoms.

Possible pheochromocytoma

Hospital outpatients' clinic

- 1** Intake appointment
 - ▶ *review symptoms*
 - ▶ *medication*
 - ▶ *physical examination*

- 2** Possible tests to identify too many stress hormones.
 - ▶ *plasma metanephrines*
 - ▶ *24 hour urine (nor) metanephrines*

- 3** Possible tests after raised stress hormones are identified.
 - ▶ *Imaging examination to examine the tumour site*

Internal medicine specialist (endocrinologist)

1

2

If pheochromocytoma is not identified, another cause of the symptoms will be looked for. If there are no particular observations, a referral back to the family doctor will follow.

Raised stress hormones.
Further examination of the tumour site

3

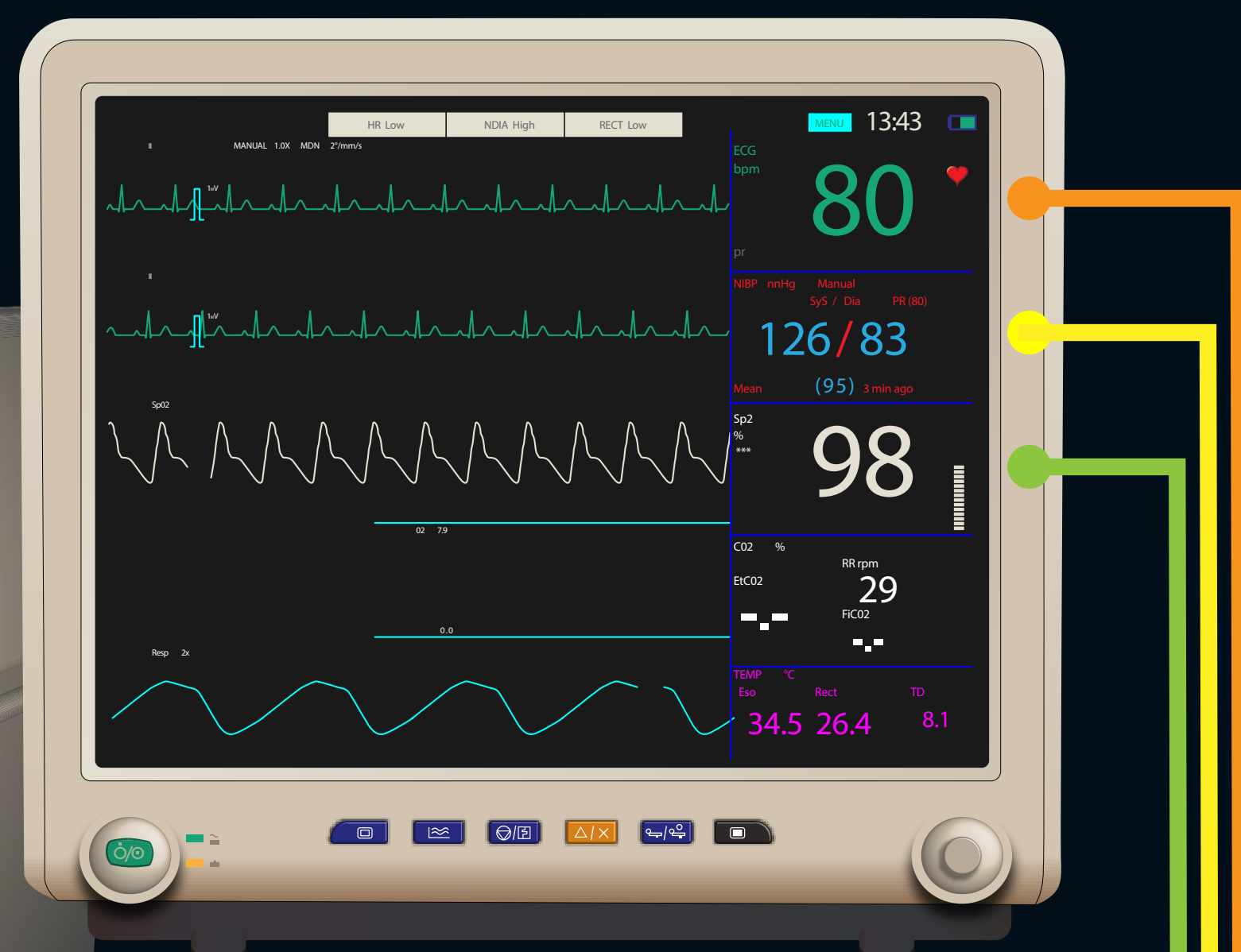
Treatment

How is pheochromocytoma treated?

Prevention of high blood pressure or blood pressure fluctuations during the operation.

Preparation for the operation with blood pressure lowering medication. Extra salt intake. Shortly before the operation, saline solution via a drip in the arm.

Operation



Heart rate

Blood pressure (top/bottom)

Oxygen level (saturation)

Check stress hormones

- ▶ plasma metanephrines
- ▶ 24 hour urine (nor)metanephrines

Annual check-up in outpatients' clinic