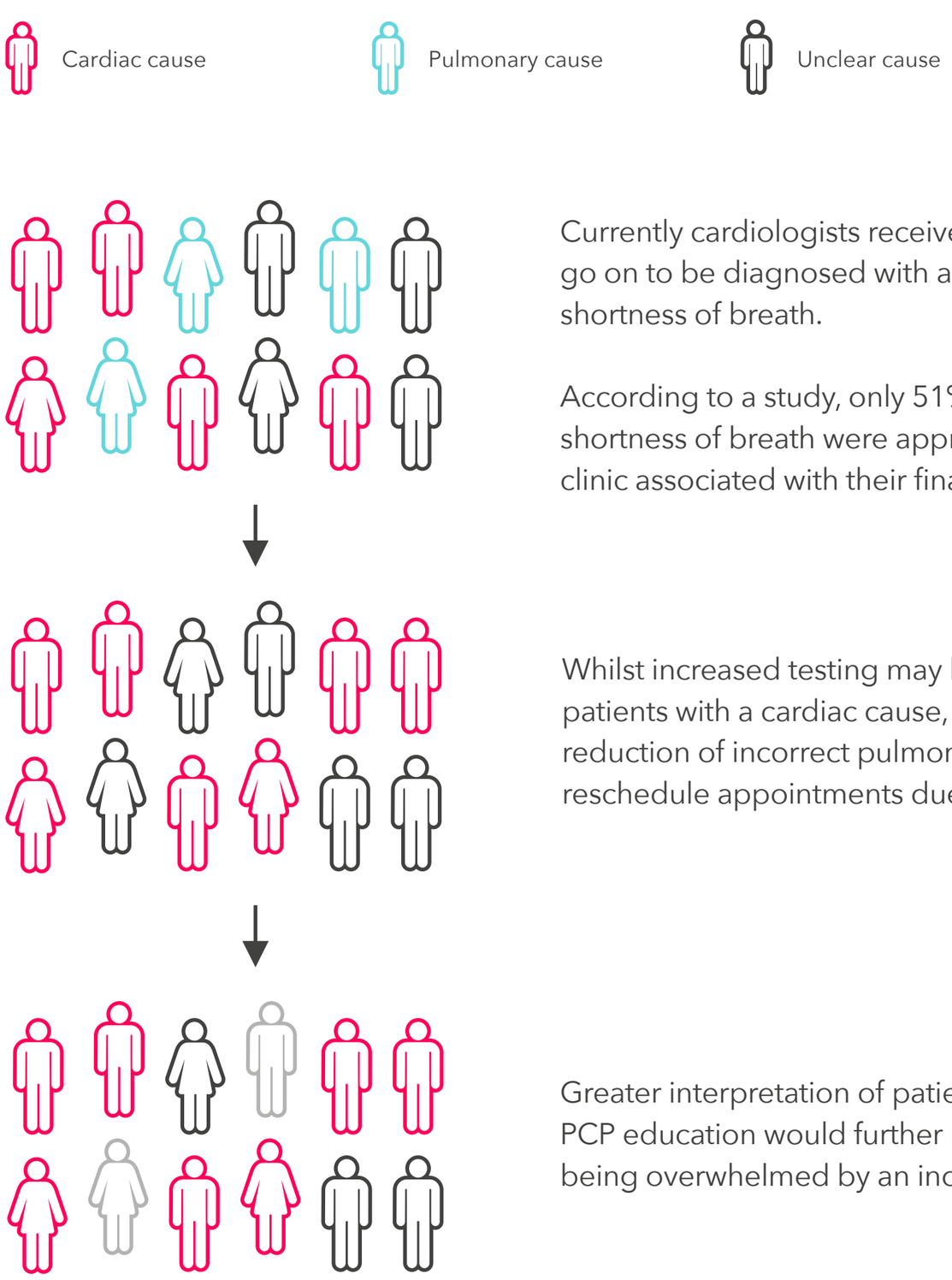
Shorten the Journey

Accelerating correct diagnosis

Wider use of NT-proBNP testing in general practice could help ensure that more patients are referred to the correct specialist for further assessment[1,2].

Improved quality of referrals



Currently cardiologists receive referrals for patients who do not go on to be diagnosed with a cardiac cause of unexplained shortness of breath.

According to a study, only 51% of patients with chronic shortness of breath were appropriately referred to the speciality clinic associated with their final diagnosis[3].

Whilst increased testing may lead to PCPs referring more patients with a cardiac cause, this burden is counter-balanced by reduction of incorrect pulmonary referrals and less need to reschedule appointments due to missing test results[2].

Greater interpretation of patients with a cardiac cause through PCP education would further lower concern of cardiologists being overwhelmed by an increasing workload[2].

Factors affecting NT-proBNP levels

NT-proBNP levels may be raised in patients with conditions other than cardiac disease. Levels may also be reduced in some patients. These factors should be taken into account when testing as shown below[2,4].

FACTORS THAT MAY IMPEDE THE INTERPRETATION OF RESULTS

Increased NT-proBNP levels[5-7]

- Age
- Comorbidities* (e.g., PAH, diabetes, renal dysfunction, anemia, pulmonary embolism, acute coronary syndrome)

Decreased NT-proBNP levels[5,6,8,9]

- Obesity**
- African or African-Caribbean family origin

*When estimated glomerular filtration rate (eGFR) is < 60 mL/min, cut-offs for detecting HF may need to be raised[1].

**In obese patients, lower natriuretic peptide concentrations mandate the use of lower cut-off values (about 50% lower)[1].

Accelerate journey to correct diagnosis

By including NT-proBNP testing in general practice, more patients at risk may be correctly identified. In this way, the patient journey from initial assessment to diagnosis may be made earlier.

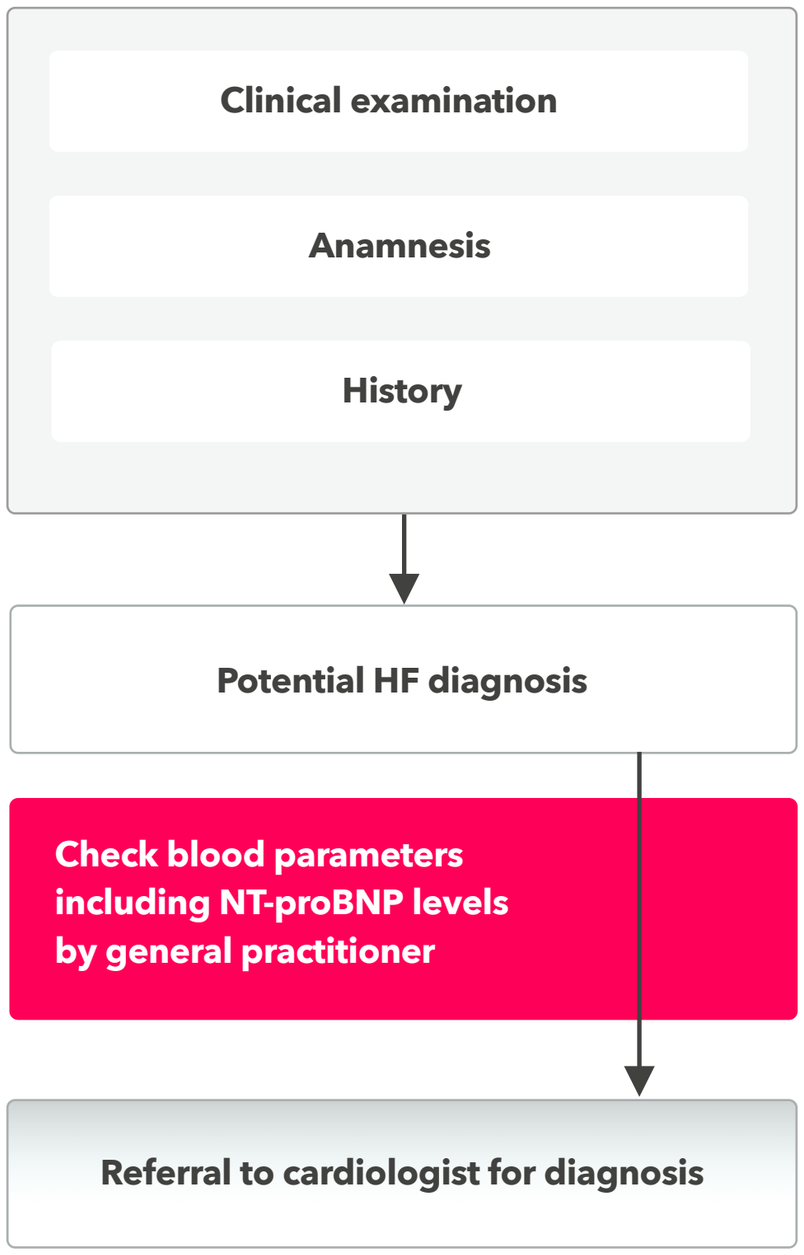
NT-proBNP evaluation early in the diagnostic pathway

- According to the ESC guidelines for the **diagnosis** of acute and chronic **heart failure**, the plasma concentration of **natriuretic peptides** can be used as an initial **diagnostic test** in patients with **unexplained shortness of breath** to rule out the possibility of heart failure[6,10]
- As the measurement of natriuretic peptides is even **available as a point-of-care test**, it can be used in **routine primary care practice** with minimal training[10]

Reduction of diagnostic delays

In case of suspected heart failure, blood analysis, including the measurement of NT-proBNP levels, can be readily performed by the general practitioner followed by referral to the cardiologist who is then responsible for proper diagnosis[10]

DIAGNOSIS OF HEART FAILURE: A DELPHI CONSENSUS[10]

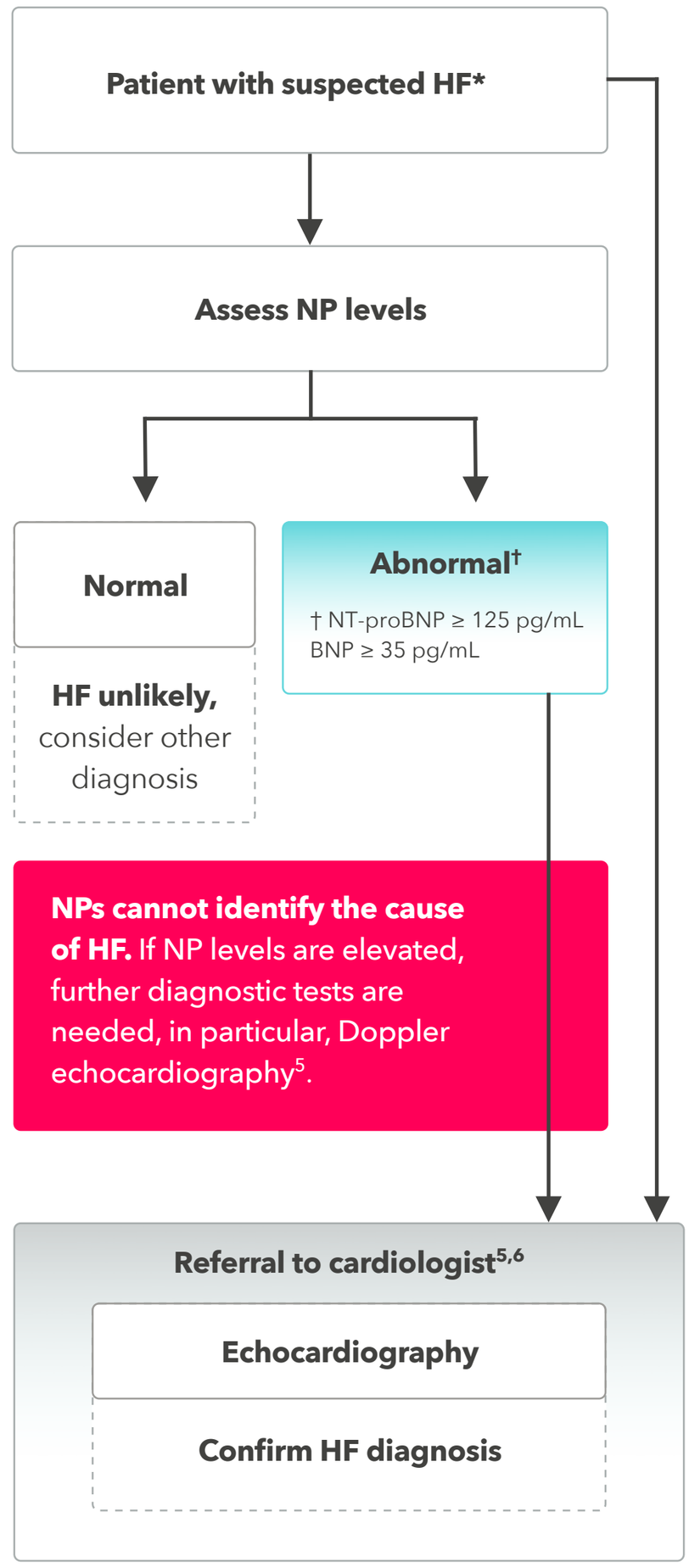


Referral for echocardiography

If heart failure is not suspected as the cause of symptoms, an NT-proBNP test can help further rule out HF or identify patients who require referral for echocardiography and a confirmed diagnosis[6,10].

Shorten the Journey

Combined with echocardiography, testing of BNP or NT-proBNP levels enables rapid and accurate diagnosis of HF and its phenotypes[5]



*Assuming HF not been excluded after assessment of HF probability (based on clinical history, physical history and ECG)

References

BNP: B-type natriuretic peptide; ECG: electrocardiogram; HF: heart failure; NT-proBNP: N-terminal pro-B type natriuretic peptide; PCP: primary care physician.

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