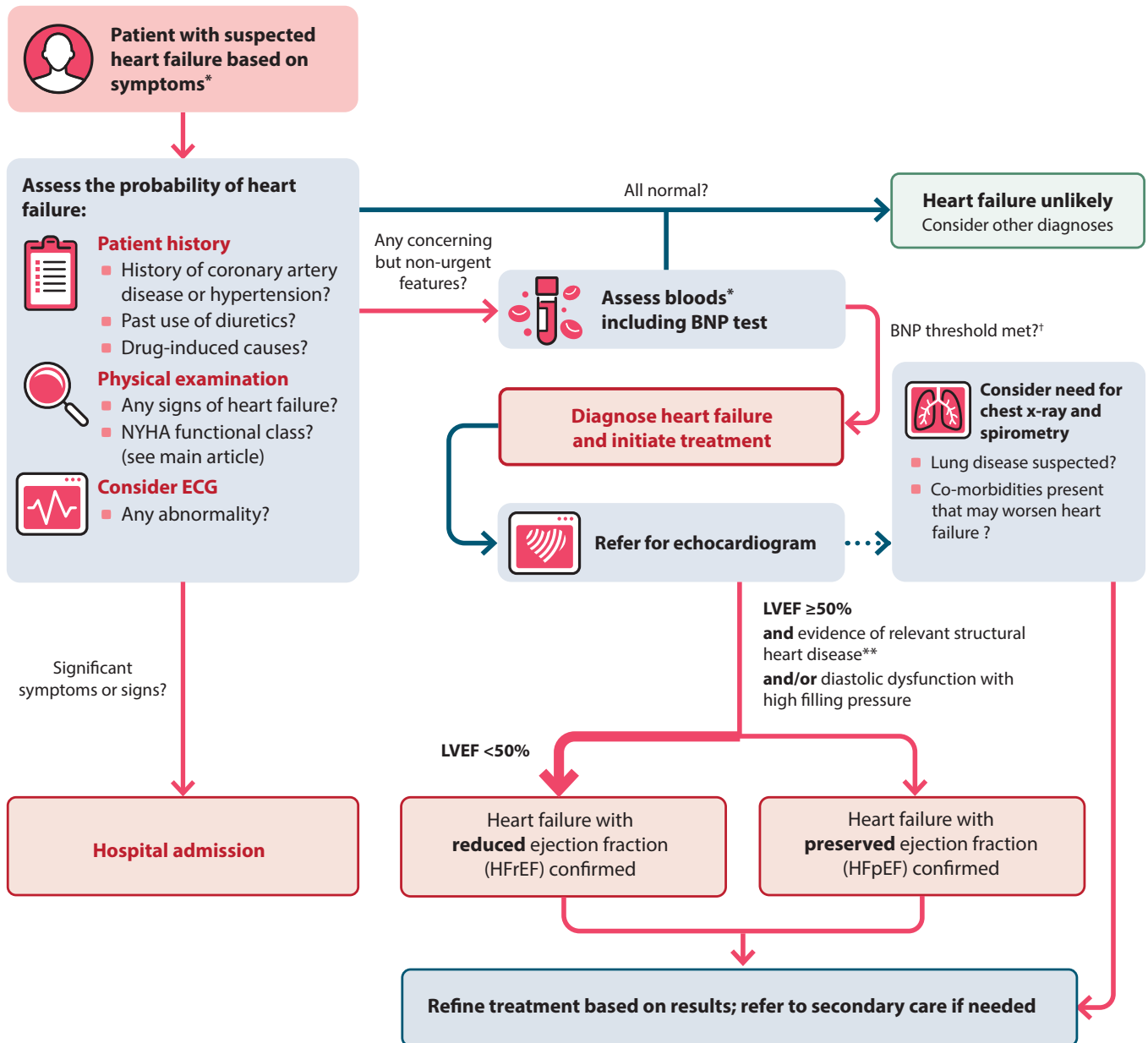


Summary: Diagnosing patients with heart failure in primary care



Common blood tests for heart failure:

- BNP/NT-proBNP[†]
- Complete blood count
- Electrolytes and renal function
- Liver function
- Thyroid function
- HbA_{1c} and lipids as part of a CVD risk evaluation

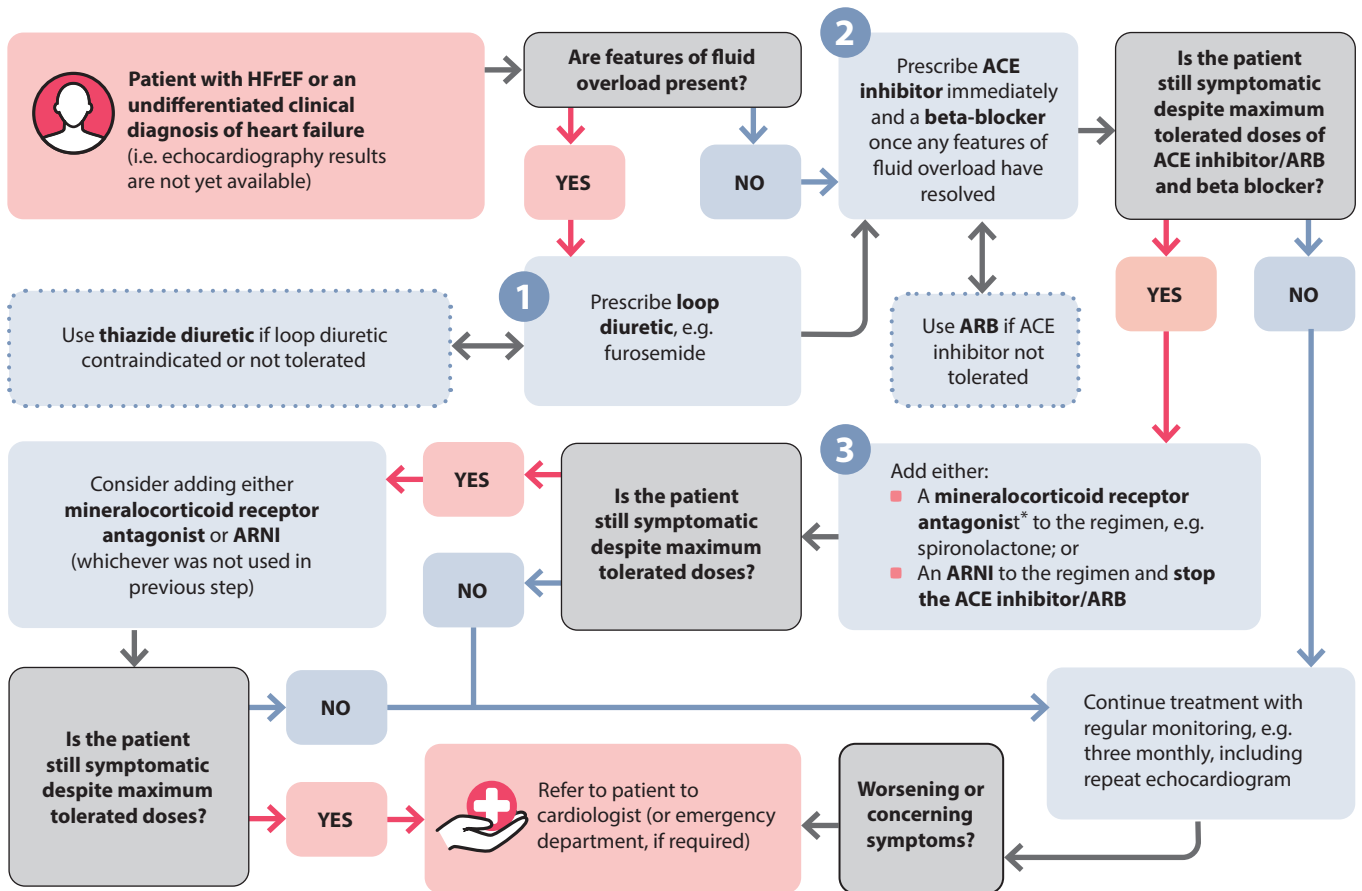
Other blood tests as appropriate:

- Thyroid function
- CRP if infection is suspected
- Serum troponin if acute onset of symptoms or an acute coronary syndrome is possible
- Iron studies (including iron levels, ferritin, transferrin saturation)[‡]

* See the **main article** for the symptoms and signs of heart failure; † Detection of elevated BNP levels is sufficient to establish a working diagnosis of heart failure (see the main article for specific thresholds), however, an echocardiogram is still important for confirmation and for guiding long-term management; ** Such as left ventricular hypertrophy or left atrial enlargement; ‡ Conventional thresholds for diagnosing iron deficiency (usually serum ferritin < 20 micrograms/L) are not reliable in patients with heart failure as this condition involves a systemic inflammatory state and ferritin levels increase in response to inflammation; therefore this wider panel of tests is recommended. See the main article for more information.

Abbreviations: BNP, brain natriuretic peptide; CRP, C-reactive protein; CVD, cardiovascular disease; ECG, electrocardiogram; HbA_{1c}, glycated haemoglobin; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association.

Summary: Managing patients with heart failure in primary care



4 Management should also include:

Additional medicines based on patient co-morbidities. For example:

| Medicine | Co-morbidity |
|------------------|-----------------------------|
| Digoxin | Atrial fibrillation |
| Anticoagulants | |
| Intravenous iron | Anaemia and iron deficiency |
| SGLT-2 inhibitor | Type 2 diabetes |

Non-pharmacological support:

- Exercise, as appropriate
- Reduce sodium intake (<2 – 3 g daily)
- Weight loss
- Adequate fluid intake (1.5 – 2 L daily)
- Reduce alcohol/smoking cessation, if relevant
- Influenza/pneumococcal vaccination

See the main text for treatment and monitoring considerations relating to

- 1 Loop diuretics
- 2 ACE inhibitors/ARBs and beta blockers
- 3 Mineralocorticoid receptor antagonists and ARNIs
- 4 Additional medicines for co-morbidities

* If a patient with heart failure has severe symptoms at presentation, they can potentially be cautiously initiated on an ACE inhibitor, beta blocker and spironolactone (i.e. at the same time) according to clinical judgement. However, a beta blocker should not be used unless the patient is euvoemic, and more frequent initial monitoring would be required. See main text for more further information on treatment requirements associated with each medicine or visit the NZ Formulary (NZF) at nzf.org.nz for specific dosing information.

Abbreviations: ACE inhibitor, angiotensin converting enzyme inhibitor; ARB, angiotensin receptor blockers; ARNI, angiotensin receptor II blocker with a neprilysin inhibitor; SGLT-2 inhibitor, Sodium glucose co-transporter-2 inhibitor.