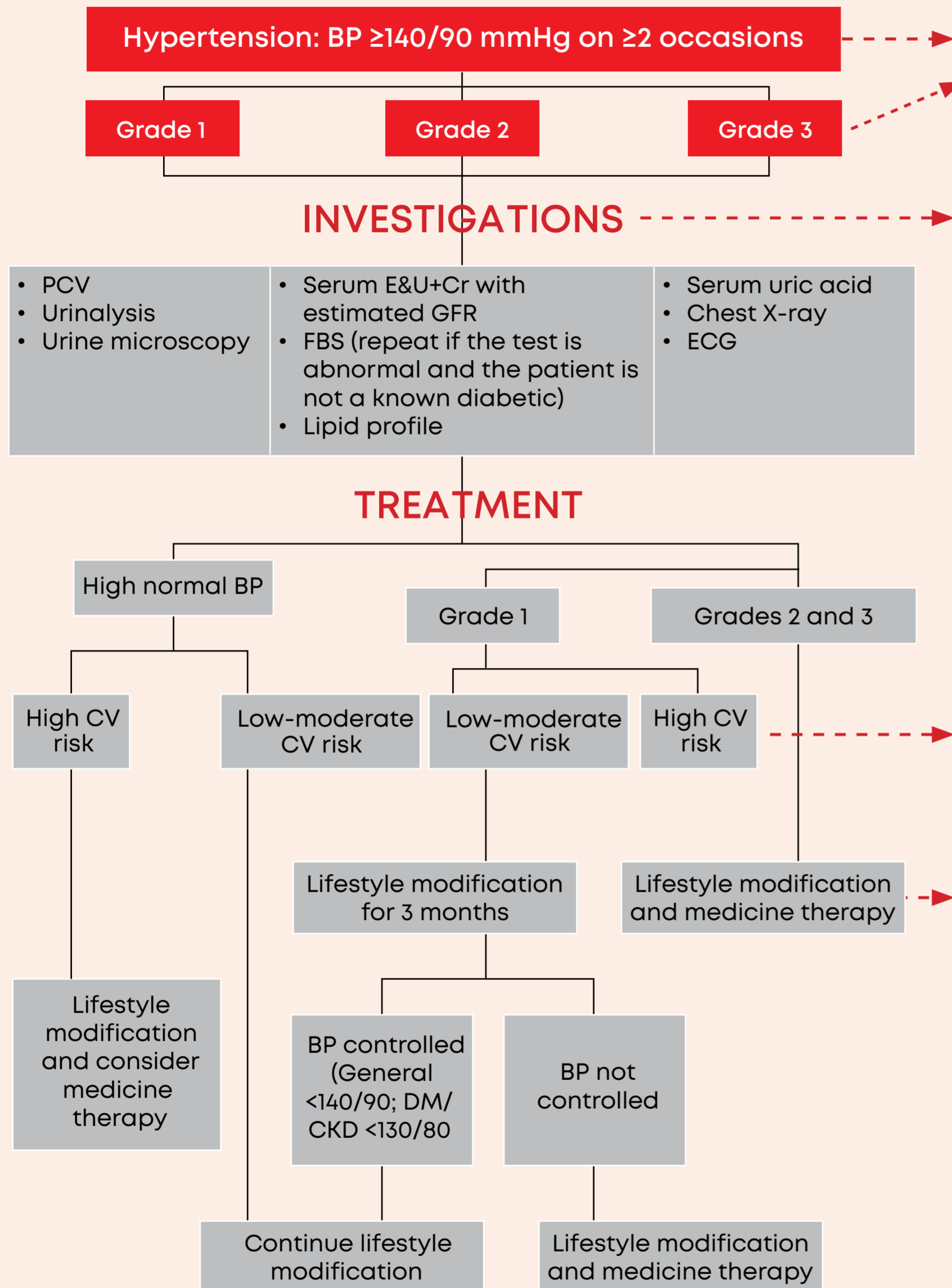


Algorithm for Management of Hypertension in Adults



Category	SBP (mmHg)	DBP (mmHg)
Optimal BP	<120	<80
Normal BP	<130	<85
High-Normal BP	13-139	85-89
Grade 1 Hypertension	140-159	90-99
Grade 2 Hypertension	160-179	100-109
Grade 3 Hypertension	\geq 180	\geq 110
Isolated systolic hypertension	\geq 140	<90

Risk factors for cardiovascular disease	Hypertension mediated organ damage (HMOD)	Complications
<ul style="list-style-type: none"> Men > 55 years Smoking Family history of premature cardiovascular disease Obesity Total cholesterol > 200mg/dl Reduced HDL Cholesterol Raised LDL-cholesterol Elevated uric acid Diabetes 	<ul style="list-style-type: none"> ECG or ECHO LVH Microalbuminuria eGFR 30 -59 ml/min Radiological or ultrasound evidence of atherosclerotic plaques Retinal Hemorrhages and exudates 	<ul style="list-style-type: none"> Stroke Transient ischemic attack Heart failure Angina Myocardial infarction Coronary revascularization Macroalbuminuria eGFR < 30ml/min Peripheral arterial disease

Other risk and disease history	Hypertension		
	Grade 1	Grade 2	Grade 3
No other risk factors	Low risk	Medium risk	High risk
1-2 risk factors	Medium Risk	Medium risk	High risk
3 or more risk factors/ predicted high risk/ hypertension – mediated organ damage or complications	High risk	High risk	High risk

Reduction in salt intake
 Weight reduction
 Physical activity
 Moderation of alcohol intake
 Increased dietary potassium intake
 Consumption of diet with increase fresh fruits, vegetables and reduced saturated fat.

Situation / Indication	Medicine
Cardiac disease	
Left ventricular hypertrophy	ACEI, ARB, diuretic, β - blocker
Heart failure	ACEI, ARB, β – blocker*, diuretic, MRA
Ischaemic heart disease	β – blocker, ACEI, ARB
Left ventricular dysfunction	ACEI, ARB, diuretic
Stroke	CCB, diuretic, ACEI
Nephropathy	ACEI, ARB, diuretic
Diabetes mellitus	ACEI, ARB, low dose thiazide and thiazide-like diuretic, CCB
Elderly	Diuretic, CCB
Pregnancy	-methyldopa, CCB (Nifedipine), labetalol, hydralazine

Recommended Approach to Pharmacological Therapy

- For single medicine therapy, thiazide/thiazide-like diuretic (or in combination with amiloride/triamterene) or a CCB is recommended.
- When initial therapy requires the use of two medicines, the combination of diuretic and CCB could be used, or another medicine selected from ACEI, ARB, beta-blocker, alpha-blocker or centrally acting agent should be added to the diuretic or CCB.
- A third medicine, from a class other than the two, should be added as required.
- Use of single pill containing 2 or 3 medicines aids adherence and is recommended.
- Effective and recommended medicine combinations are shown below;
 - » Diuretic + CCB
 - » Diuretic + ARB
 - » Diuretic + ACEI
 - » Diuretic + centrally acting medicine
 - » Diuretic + β - blocker
 - » CCB + β -blocker
 - » CCB + ACEI
 - » CCB + ARB
 - » CCB + β -blocker + ACEI/ARB
 - » Diuretic + CCB + ACEI/ARB
 - » Diuretic + CCB + centrally acting medicine

Note: Diuretic + β -blockers should be used with caution because of the risk of new-onset DM
 The use of antiplatelet agent (aspirin or clopidogrel) for primary prevention in low risk hypertensive patients is generally not recommended.

Monitoring/ Follow up

Follow up for life, with visit intervals ranging from one week to six months.
 Emphasize adherence.
 Home monitoring of BP, using appropriate devices.
 Continued monitoring of organ function, especially regarding the kidneys at least once a year. Patients with low CV risk may be followed up in a primary care setting after control of BP. Telemonitoring to assist communication between the care giver and the patient.