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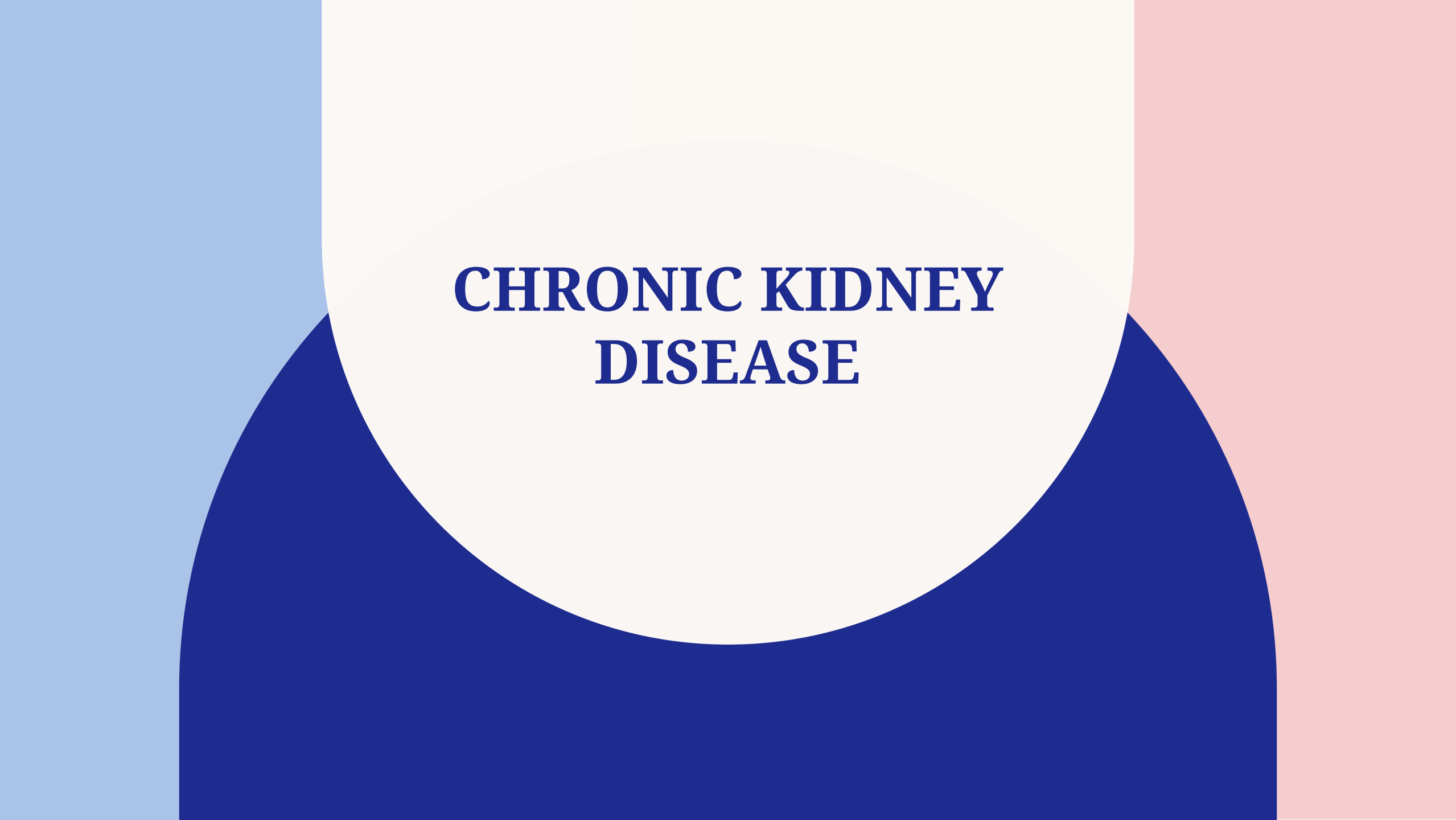
Programme: MSc Public Health and Social care in practice

Topic: Chronic Kidney Disease

Module: Community care and management of long-term condition

Module Code: LCHS7003

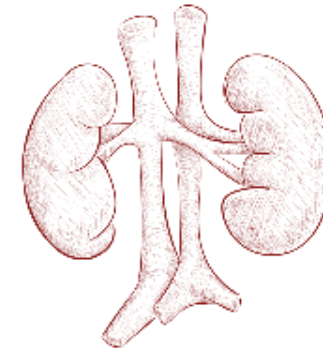
Lecturer: Dr Raheela Shaikh

The background features a large white circle in the center, partially overlapping a light blue rectangle on the left and a light pink rectangle on the right. A dark blue shape, resembling a large arch or a stylized kidney, is positioned at the bottom, framing the white circle.

CHRONIC KIDNEY DISEASE

INTRODUCTION

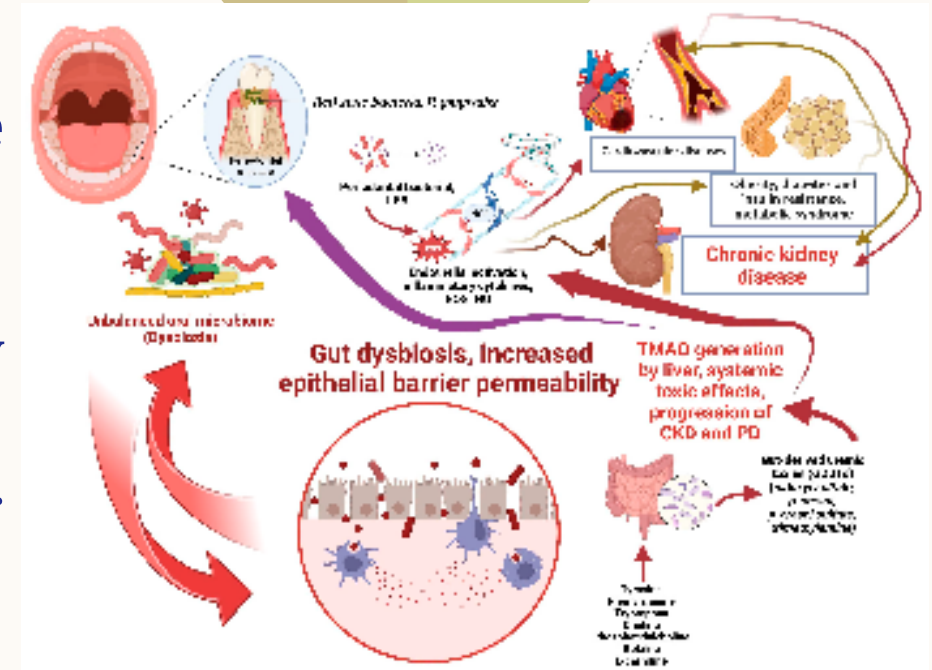
- Chronic kidney disease is progressive loss of kidney function over time (Kovesdy, 2022).
- CKD significantly impacts global health and healthcare systems worldwide (Francis et al., 2024).
- Early stages often remain asymptomatic, delaying diagnosis and treatment.
- Advanced CKD leads to complications including cardiovascular disease and kidney failure.



- progressive loss of kidney function over time can lead to end-stage renal disease (ESRD), requiring dialysis, and can be fatal if not treated
- it can present as a 'silent disease' and may not have any warning stages

DEFINITION OF CHRONIC KIDNEY DISEASE

- CKD is defined as persistent kidney damage or reduced function ≥ 3 months.
- Diagnosis commonly based on decreased glomerular filtration rate or kidney abnormalities.
- Kidney damage may involve structural or functional abnormalities of renal tissue.
- Untreated CKD may progress to end-stage kidney disease requiring dialysis.



GLOBAL AND REGIONAL STATISTICS

- CKD affects approximately 10% of the global population (Mark et al., 2025).
- Global burden of CKD has increased significantly over recent decades.
- Mortality and disability from CKD continue rising worldwide (Wang et al., 2025).
- CKD recognised among leading causes of death globally (WHO, 2025a).

KIDNEY DISEASE & OBESITY

Kidney Disease Fact #1



of the population
worldwide is
affected by
**CHRONIC KIDNEY
DISEASE (CKD)**

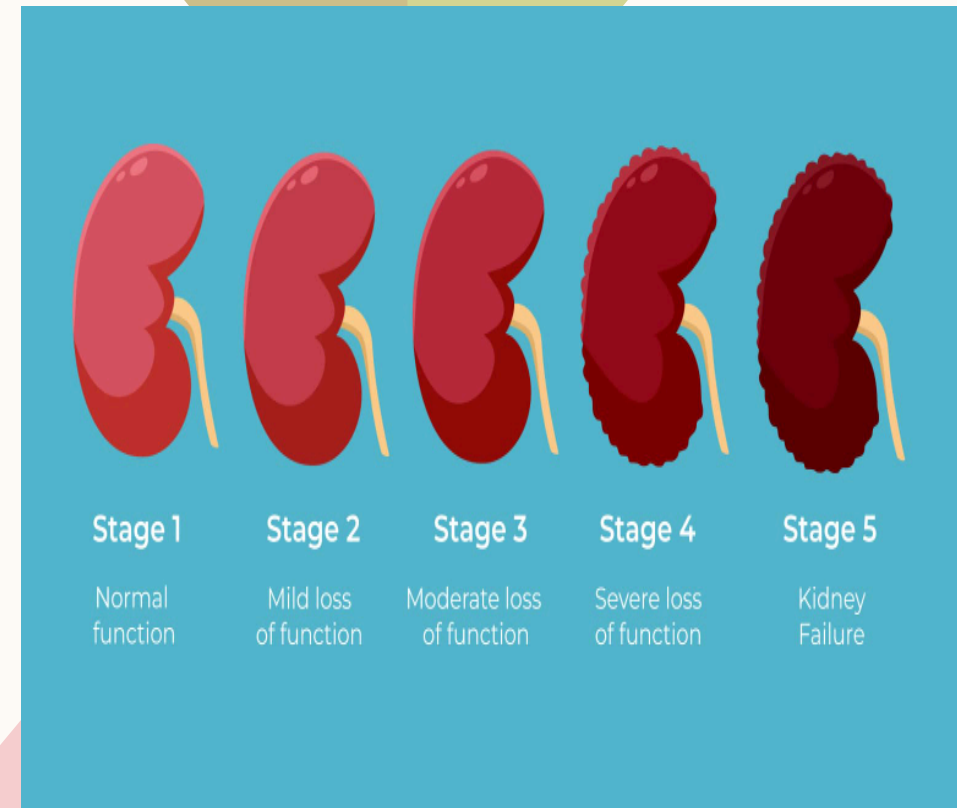


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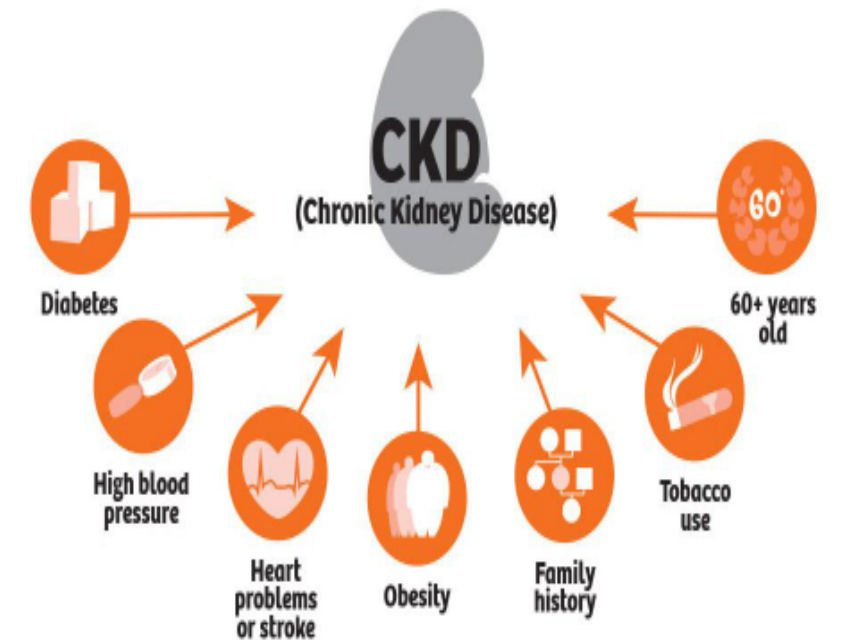
STAGES OF CHRONIC KIDNEY DISEASE

- CKD is classified into five stages based on glomerular filtration rate.
- Stage 1 indicates mild kidney damage with normal kidney function.
- Stage 2 indicates mild reduction in kidney function with evidence of kidney damage.
- Stage 3 reflects moderate kidney impairment requiring clinical monitoring.
- Stage 4 represents severe kidney damage with significant reduction in kidney function.
- Stage 5 represents kidney failure requiring dialysis or transplantation.



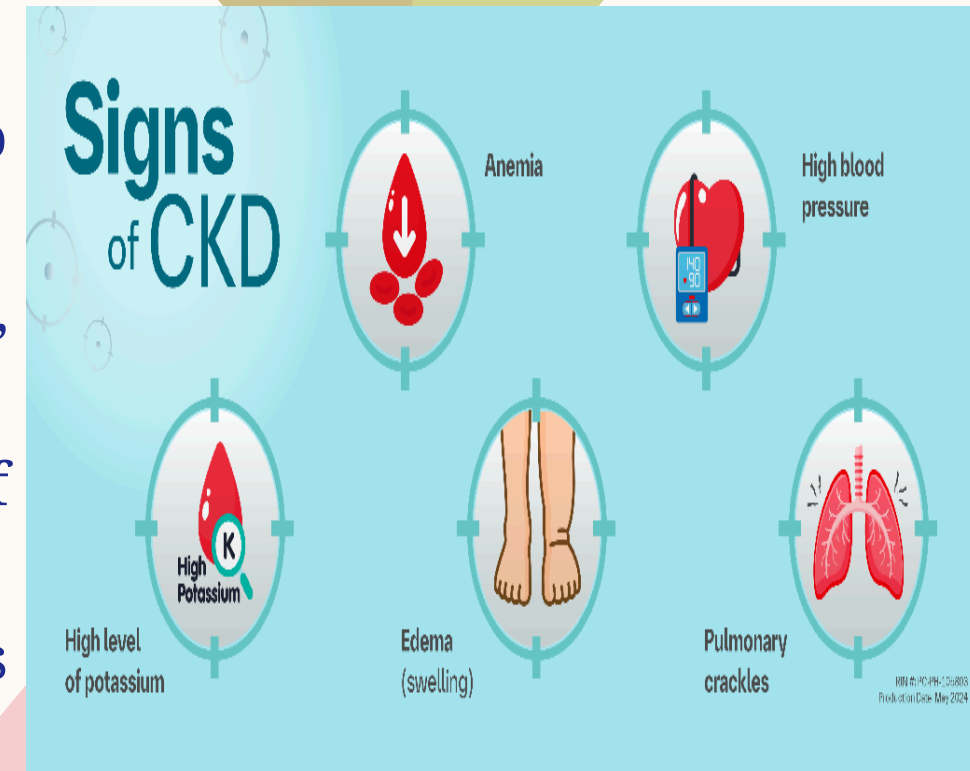
RISK FACTORS OF CHRONIC KIDNEY DISEASE

- Diabetes and hypertension are leading causes of CKD worldwide (Junejo et al., 2025).
- Other modifiable risks include obesity, smoking and unhealthy diet.
- Non-modifiable risks include age, genetics and family history.
- Environmental and socioeconomic factors also influence CKD development.



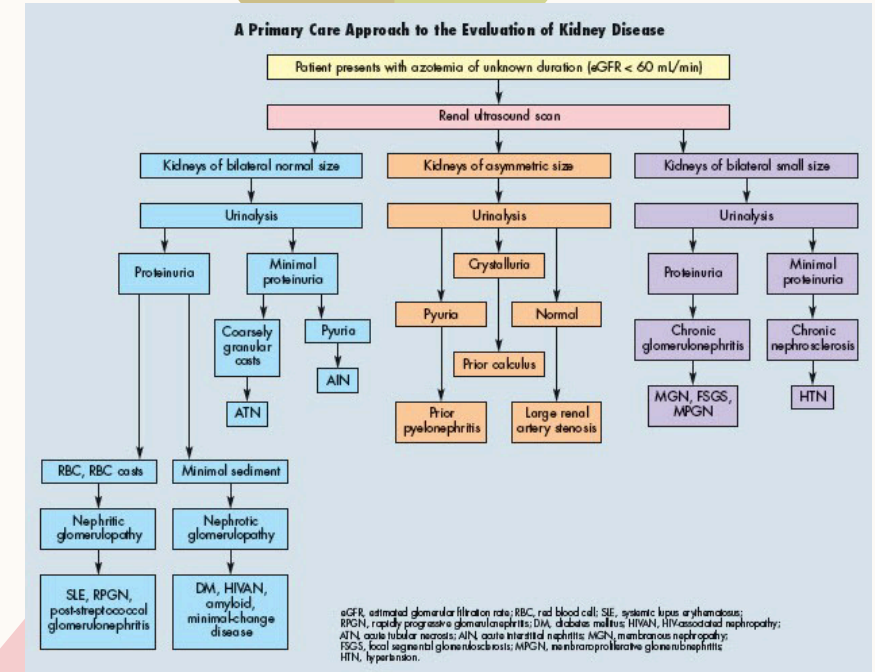
SIGNS AND SYMPTOMS

- Early CKD may present with few or no symptoms.
- Common symptoms include fatigue, swelling and reduced urine output.
- Patients may experience nausea, loss of appetite and muscle cramps.
- Advanced CKD causes severe complications including fluid imbalance and anaemia.



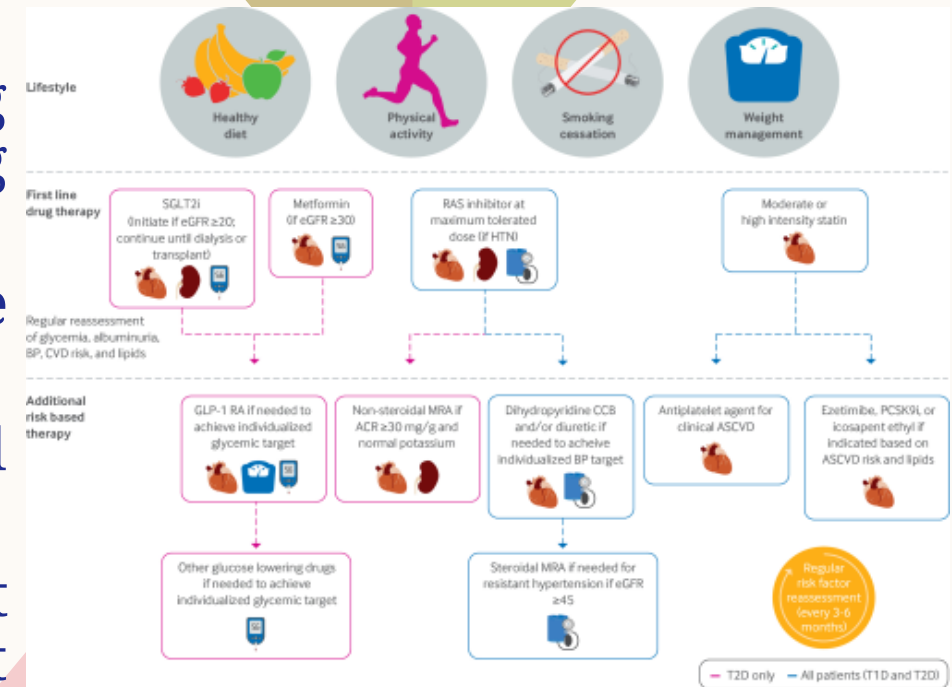
INITIAL ASSESSMENT AND DIAGNOSIS

- Primary care physicians assess patients presenting with kidney-related symptoms.
- Blood tests measure serum creatinine and estimate glomerular filtration rate.
- Urine tests identify proteinuria and kidney damage indicators.
- Imaging techniques may detect structural abnormalities of kidneys.



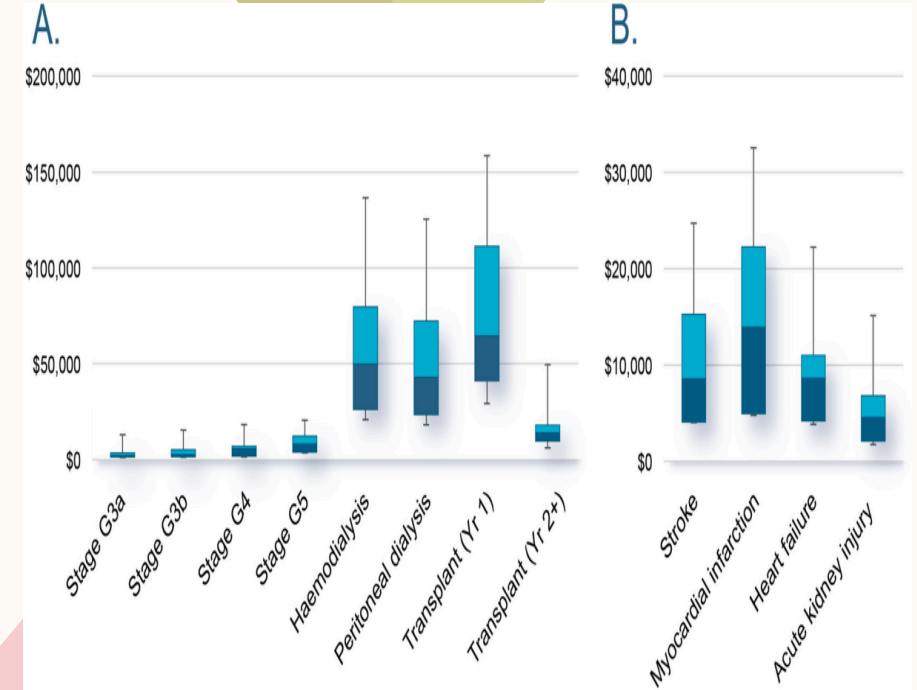
MANAGEMENT AND REHABILITATION (CLINICAL GUIDELINES)

- CKD management focuses on slowing disease progression and preventing complications (Stevens et al., 2024).
- Blood pressure and glucose control are essential treatment strategies.
- Lifestyle modification including diet and exercise supports kidney health.
- Multidisciplinary care improves patient outcomes and disease management (Olszewski et al., 2025).



SOCIAL AND ECONOMIC BURDEN

- CKD increases healthcare costs due to long-term treatment and monitoring.
- Patients may experience reduced work productivity and employment limitations.
- Dialysis and transplantation create substantial economic burden on healthcare systems (Mark et al., 2025).
- CKD also causes psychological stress affecting patients and families.



PREVENTION AND PERSON-CENTRED CARE

- Prevention focuses on controlling diabetes and hypertension risk factors.
- Public health strategies promote early detection and lifestyle interventions (Ortiz et al., 2025).
- Patient education improves disease awareness and treatment adherence (Faldu and Knicely, 2025).
- Person-centred care supports shared decision-making and self-management (Safdar and Aslam, 2025).

Patient-Centered Care



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