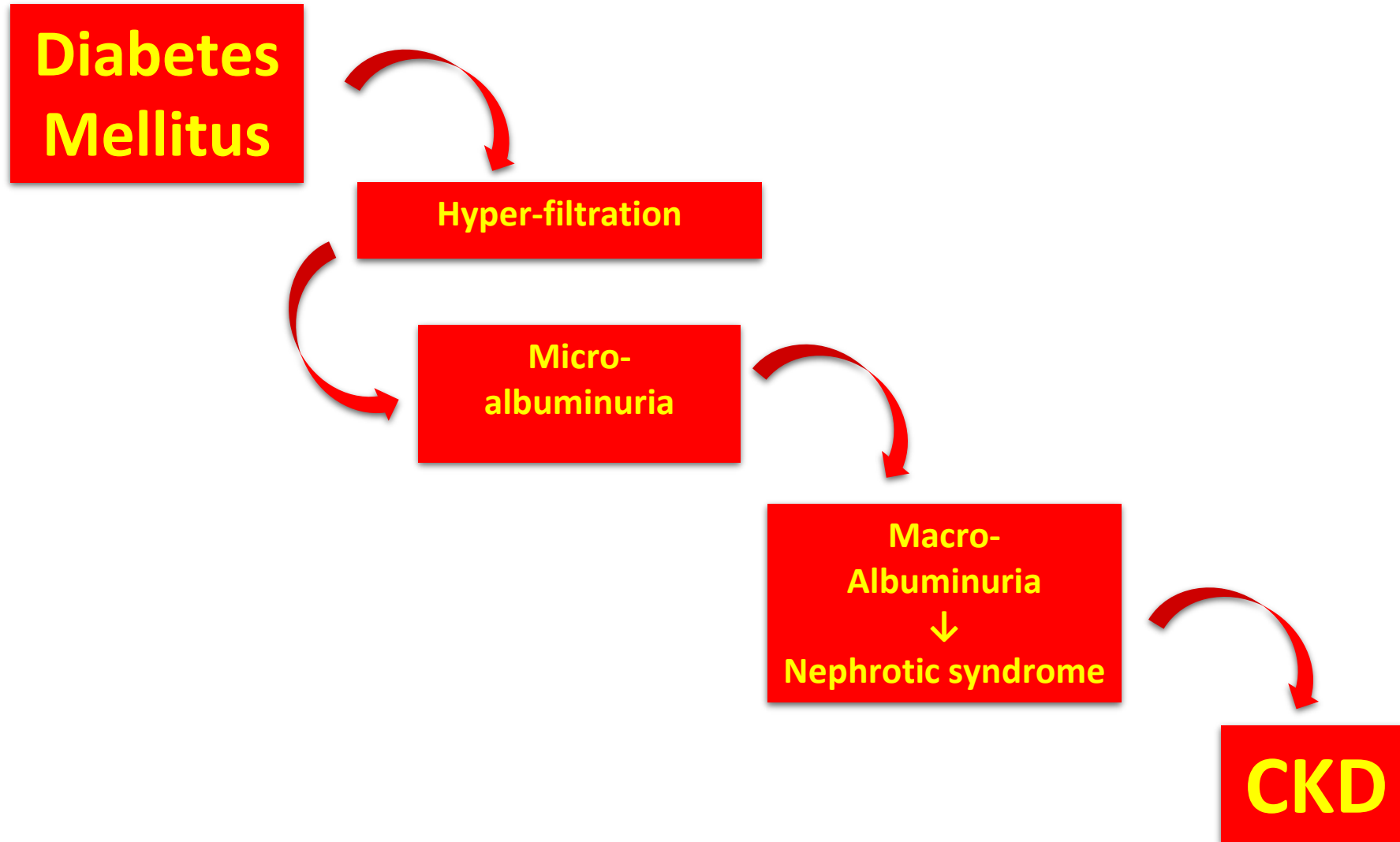


# Definition of Diabetic Kidney Disease

A chronic kidney disease [CKD] in :

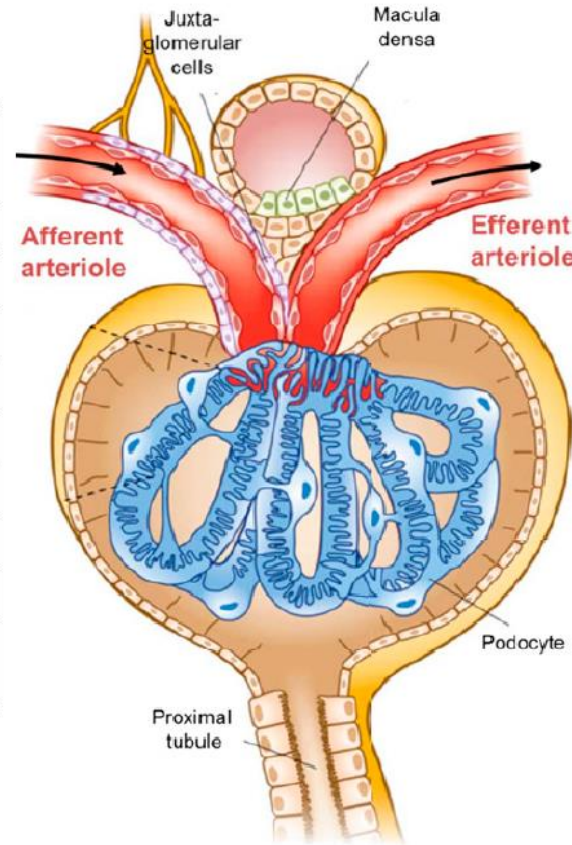
- Patients with either type 1 or type 2 diabetes
- Persisting **albuminuria** of >300 mg/24 h or an albumin-to-creatinine ratio (ACR) of >300 mg/g, confirmed in at least 2 of 3 samples,
- Concurrent presence of **diabetic retinopathy**
- absence of **signs of other forms of renal disease.**

# Time line of the DKD



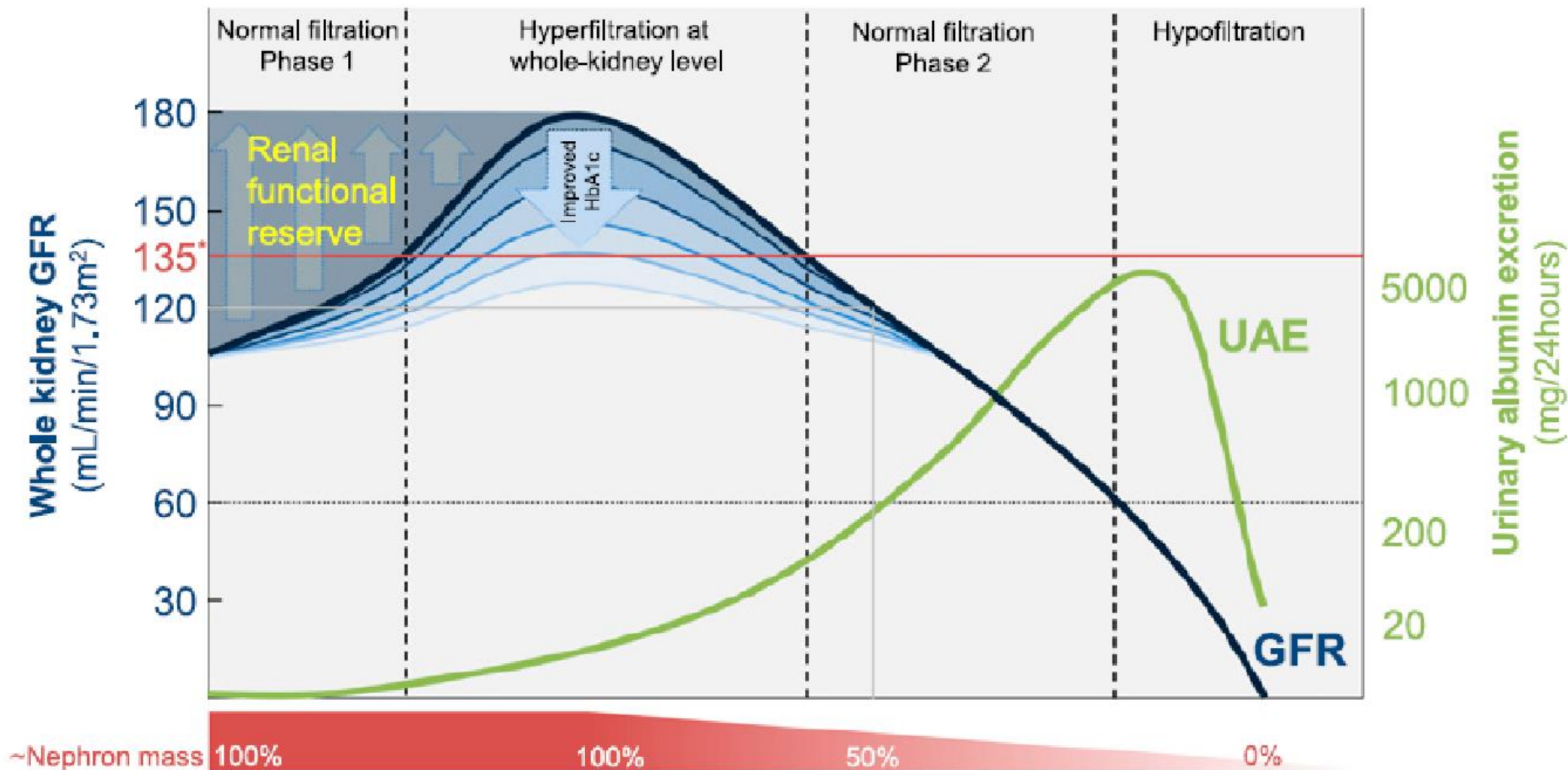
## Schematic (net) effect of factors implicated in the pathogenesis of glomerular hyperfiltration in diabetes

Factors causing a net reduction of afferent arteriolar resistance
<b>Vascular factors</b>
Nitric oxide bioavailability
COX-2 prostanoids
Kalikrein-kinins
Atrial natriuretic peptide
Angiotensin(1-7)
Hyperinsulinemia <i>per se</i>
<b>Tubular signals</b>
Inhibition of tubuloglomerular feedback (macula densa signals)



Factors causing a net increase of efferent arteriolar resistance
<b>Vascular factors</b>
Angiotensin-II
Thromboxane A2
Endothelin-1 (ETA receptor)
Reactive oxygen species

**Classic course of whole-kidney GFR and UAE according to the natural (proteinuric) pathway of DKD**



# Definition of Diabetic Kidney Disease

A chronic kidney disease [CKD] in :

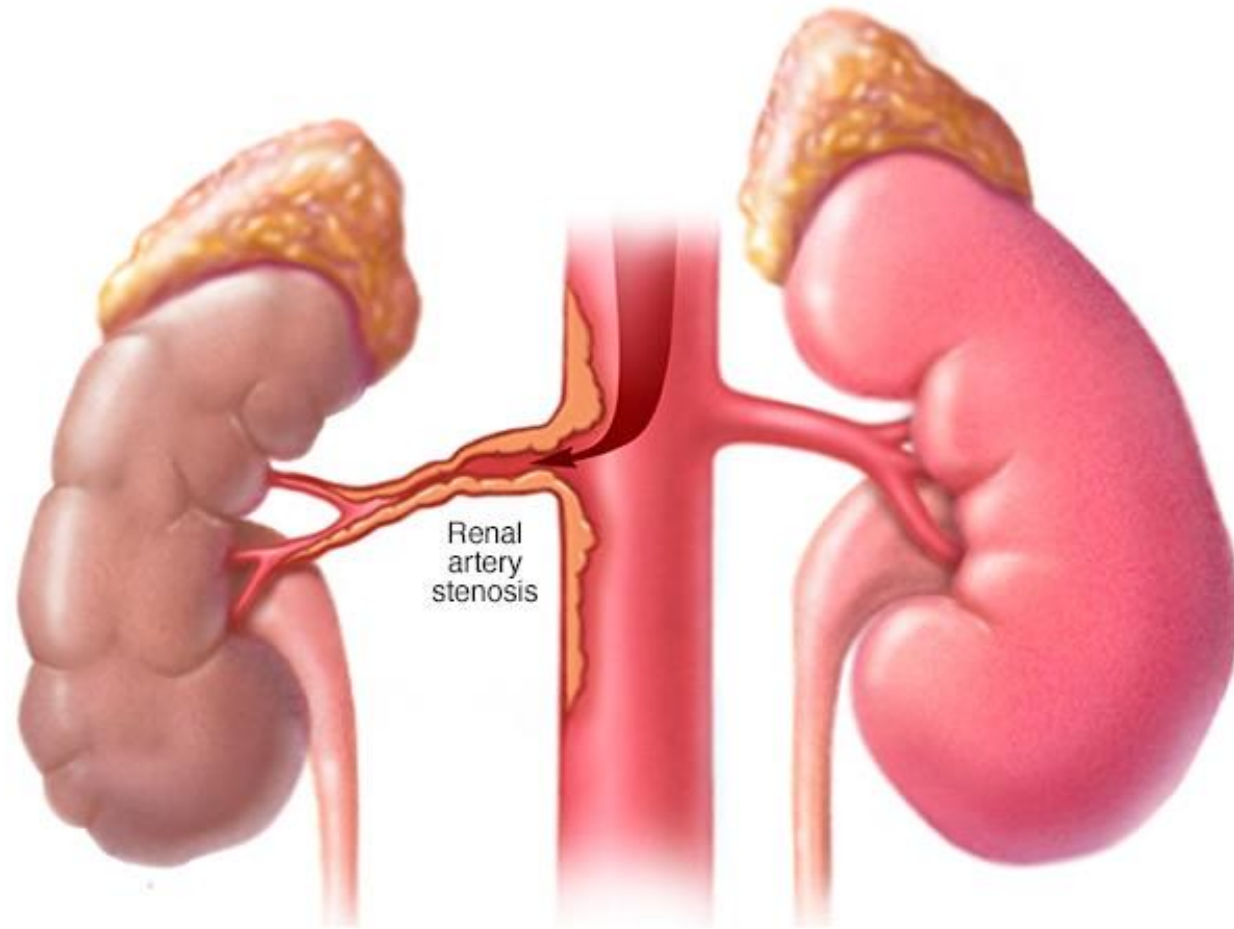
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# Other renal diseases in Diabetes

- Glomerulopathies other than DN
  - UTI, Interstitial N
  - Vascular disease
    - Microvascular
    - Macrovascular

# Atheroembolic disease: clinical signs

- Fast worsening of renal function
- Ischemic peripheral lesions
- Increased RAS activity → HT
- Altered vision
- Confusion
- Livedo reticularis



***Renal artery atherosclerosis in diabetes***



# Suspicion of NDKD: **vascular disease**

- Rapidly worsening renal function, sometime occurring after initiation of RAAS blockade
- No or minimal proteinuria
- Negative urine sediment
- Refractory HT