

Diabetes Complications:

Diabetic Nephropathy

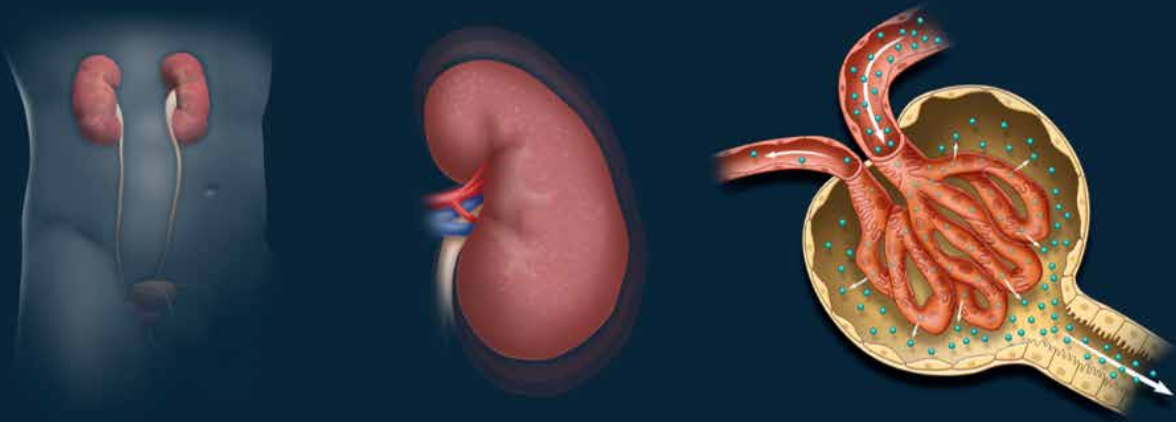


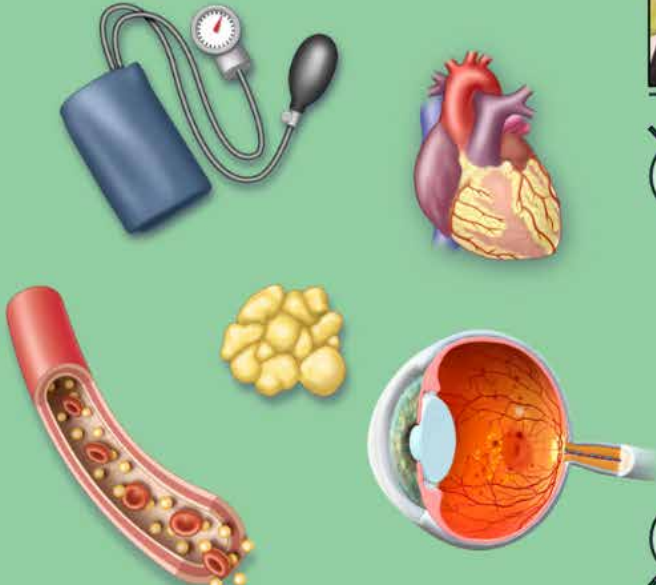
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Diabetic Nephropathy is a diagnosis that refers to specific pathologic structural and functional changes seen in the kidneys of patients with DM (both Type 1 and Type 2) that result from the effects of DM on the kidney. These changes result in a clinical presentation that is characterized by: proteinuria and progressive reductions in kidney function.

She is a 58 year old female with diabetes mellitus type 2 for the last 10 years. Her comorbidities include hypertension. Additionally she has microvascular disease with retinopathy for which she's receiving Anti-VEGF injections. Furthermore she's been found to have heart failure with preserved ejection fraction on an echocardiogram.

What is Diabetic Nephropathy?





CASE STUDY

Ms. M.T.
58 YO, F with DM2 for 10 years

-  **Hypertension**
-  **Retinopathy and is receiving Anti-VEGF injections**
-  **HFpEF found on echo with Echocardiographic Regional Wall Motion Abnormalities (RWMA)**
-  **Dyslipidemia**
-  **Obesity**

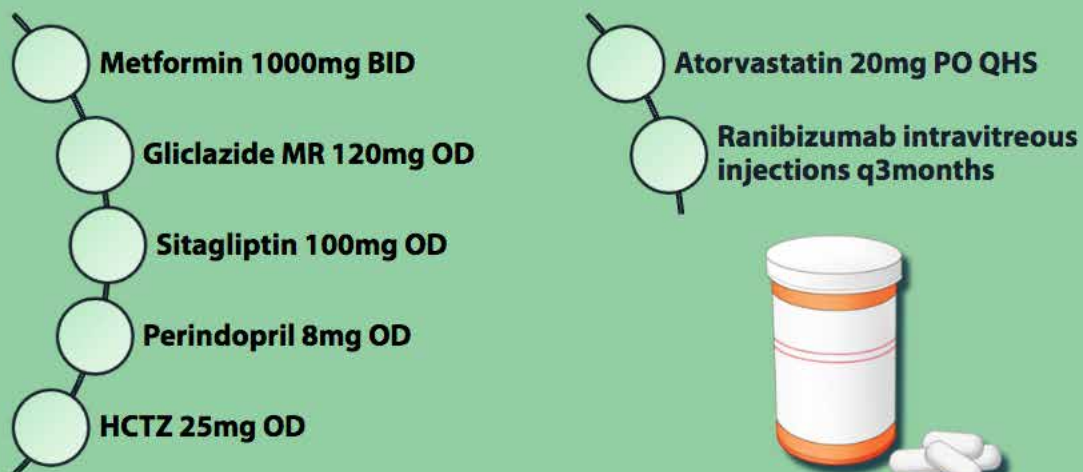
She has regional wall motion abnormalities on that echocardiogram. She also has dyslipidemia and obesity.

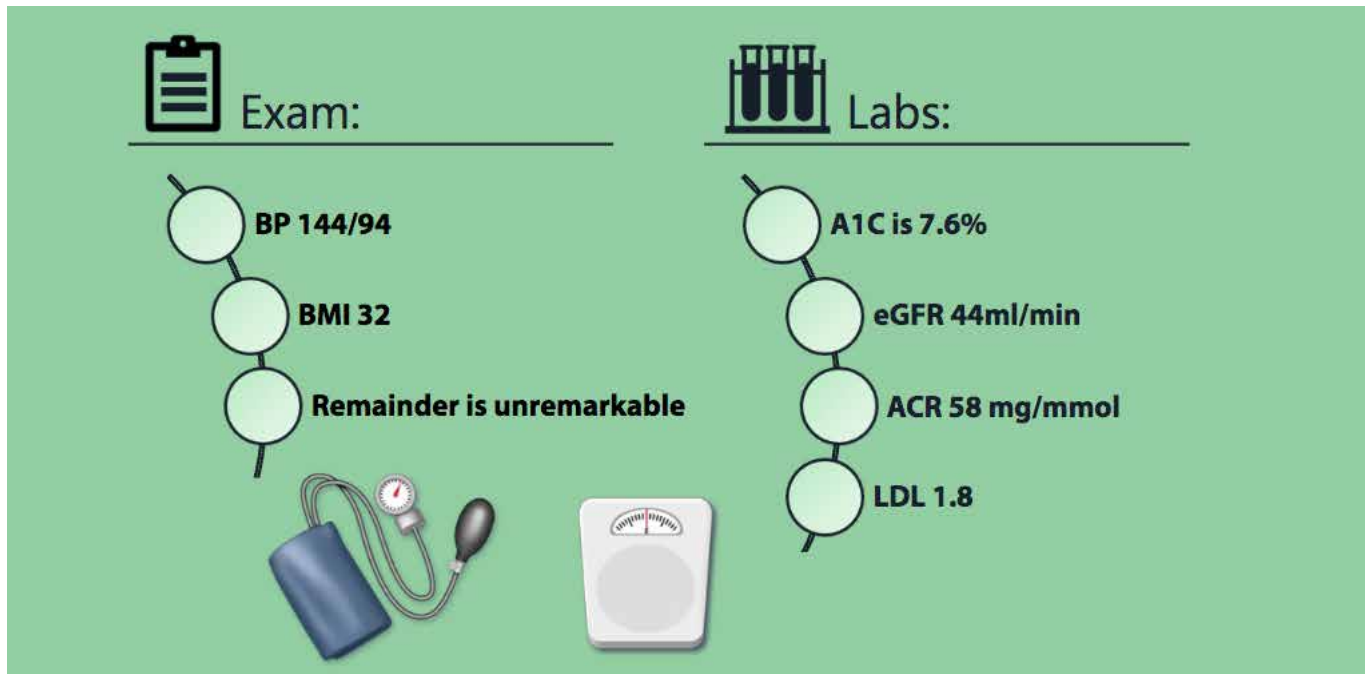
In terms of her medications the patient is on Metformin 1000mg

bid, Glimepiride MR 120mg daily, Sitagliptin 100mg daily, Perindopril 8mg daily, Hydrochlorothiazide 25mg daily, Atorvastatin 20mg PO QHS, and Ranibizumab intravitreal injections q3 months.



Meds:





Her physical examination reveals a blood pressure of 144 over 94. Her BMI is 32 and the remainder of her physical examination is unremarkable. Her labs show us a hemoglobin A1C of 7.6% a eGFR of 44ml per minute an ACR of 58mg/mmol and an LDL of 1.8.

The important question is how can we optimize MT's diabetes care and in order to answer that question you will have to use all of the information that's been provided in this session.



Clinical Pearls

The hallmark of Diabetic Nephropathy is albuminuria. Albuminuria is a marker of poor renal and CV prognosis and should be identified in all patients where CKD is suspected.

Organ protection should be a priority in patients with DN. Very solid evidence exists for the SGLT2i class as it pertains to renal protection. Patients with DN are at very high risk of CV disease and its complications. There are robust data demonstrating CV protection when SGLT2i and GLP-1RAs are used in patients with DKD.

A1C control remains a critical component of preventing the progression of DN and can now be achieved in a safe manner with newer agents that do not cause hypoglycemia.