Patient ID	Patient Name		Birth Date	Gender	Age
321	TEST, IMPLEMENTATION TESTING		1956-05-23	F	57
Order Number	**Client Order Number**	**Ordering Physician**	**Report Notes**		
R1059157	R1059157	,			
Account Information		**Collected**			
C7028846 DLMP Rochester		10 Apr 2014 06:00			

REVISED REPORT

RenalPath, Level IV, Wet Ts MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

Renal Bx, Electron Microscopy MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

IgA IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

IgG IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

IgM IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

Lambda IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

Kappa IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

C1q IF, Renal MCR
Performed
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C3 IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

Albumin IF, Renal MCR
Performed
Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:55

Fibrinogen IF, Renal MCR
Performed
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QA Environment

Performing Site Legend

Code	Laboratory	Address
MCR	Mayo Clinic Dept. of Lab Med and Pathology	200 First Street SW, Rochester, MN 55905

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REVISED REPORT

RenalPath Consultation, Wet Tissue

REVISED **Accession Number** MCR

KR14–4

REVISED REPORT

Referring Pathologist/Physician MCR

Doctor Test Jr., M.D.

Ref Path/Phys Address MCR

Methodist Hospital
200 1st Street SW
Rochester, MN 55905
507–266–0740

Final Diagnosis: MCR

Kidney, needle biopsy: 1) Moderate global glomerulosclerosis with severe interstitial fibrosis and tubular atrophy associated with severe arterial sclerosis. 2) Diffuse mild diabetic mesangial sclerosis, class IIA. 3) Acute tubular injury with occasional oxalate crystals. See comment.

Electron microscopy will be reported as an addendum.

Comment: MCR

The negative immunofluorescence argues against an immune complex-mediated glomerular disease process. The overall features of this biopsy are suggestive of chronic vascular injury with global glomerulosclerosis, hypoperfusion, and severe arterial sclerosis.

There are changes of diabetes, which are best classified as class IIA. Tubular epithelial cell injury is noted with rare calcium oxalate crystals. The latter is likely secondary to acute tubular injury; however, in the clinical setting of gastric bypass, the less likely possibility of an enteric hyperoxaluria needs to be kept in mind.

Patient is a 57-year-old male with a history of diabetes, hypertension, and his past history is significant for gastric bypass with associated 200-pound weight loss. The patient presents with elevated creatinine and proteinuria, which has been steadily increasing. The proteinuria has increased since the age of 40 years from a baseline of about 1.7 to currently 2.5 g/24 hour. Creatinine is 2.5 mg/dL. Complement C3 and C4 are normal. Hepatitis B and C are normal.

REVISED **Microscopic Description:** MCR

LIGHT MICROSCOPY: Tissue sections are stained with H and E, PAS, Masson trichrome and Jones methenamine silver to aid in the morphological interpretation. The tissue submitted for light microscopy is composed of cortex and medulla with at least 24 glomeruli, of which 11 are globally sclerosed, and 1 demonstrates focal segmental glomerulosclerosis. Several of the glomeruli, which are sclerosed, are

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localized to regions of scarring, adjacent to which the glomeruli demonstrate periglomerular fibrosis, ischemic wrinkling, and features of hypoperfusion. The better-preserved glomeruli demonstrate a mild increase in the mesangial matrix with mild mesangial hypercellularity. No large, well-formed silver- and PAS-positive nodules are identified. No endocapillary proliferation of fibrinoid necrosis seen. Special stains do not demonstrate spikes, craters, or basement membrane duplication.

Tubules and interstitium: There is severe interstitial fibrosis with tubular atrophy affecting the sample multifocally, 50% overall. There is tubular epithelial cell injury with luminal ectasia, and rare intratubular calcium oxalate crystals are noted.

There is mild interstitial inflammatory cell infiltrate with mononuclear cells.

Vessels: There is moderate to severe intimal fibrosis of the larger arteries and arterioles and moderate arteriolar hyalinosis.

IMMUNOFLUORESCENT HISTOLOGY: Immunofluorescence studies were performed using antibodies to albumin, IgA, IgG, IgM, C3, C1q, fibrinogen, kappa and lambda light chains. Tissue submitted for immunofluorescence studies contains 16 glomeruli, of which 5 are globally sclerosed. There is linear glomerular and tubular basement membrane staining with albumin (1+) and IgG (2+). Fine granular mesangial staining with IgM (trace), kappa and lambda light chains (trace) is noted. There is no significant glomerular staining with IgA, C1q, C3, fibrinogen. Casts are seen, which stain equally with IgA, kappa and lambda light chain.

Signing Pathologist: MCR

4/11/2014 14:54 Interpreted by: Pathologist X. Test, M.D.

Report electronically signed by Debbie A. Postier
Transcribed by: dap07 4/11/2014 14:49:57

Specimen: MCR

A:RenalPath Consultation, Wet Tissue;

Material: MCR

1–10% formalin wet tissue
1 - Zeus wet tissue
1 - Gluta/Trumps wet tissue

SLIDE DISPOSITION:

REVISED Addendum: MCR

Addendum:

ELECTRON MICROSCOPY: Survey sections from the four blocks examined contain a total of four glomeruli, of which one is hypoperfused. Block 2, containing two glomeruli, is then ultrathin sectioned and examined by transmission electron microscopy. The glomeruli demonstrate diffuse mild increase in the mesangial matrix.

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There is increased mesangial debris. No well formed immune complex type deposits are identified. There is prominence of the mesangial fibers. The glomerular basement membranes are mildly thickened.

There is segmental wrinkling of the basement membrane loops. There are occasional intramembranous granular deposits with rarefaction of the periphery. There is endothelial cell injury. No tubuloreticular inclusions are identified. There is moderate podocyte foot process effacement. There is arteriolar hyalinosis.

There is tubular basement membrane thickening with interstitial inflammatory cell infiltration.

Impression: Kidney, needle biopsy: 1) Moderate global glomerulosclerosis with severe interstitial fibrosis and tubular atrophy associated with severe arterial sclerosis. 2) Diffuse mild diabetic mesangial sclerosis, class IIA. 3) Acute tubular injury with occasional oxalate crystals.
Transcribed by: dap07 4/11/2014 14:59:04 Signed by Pathologist X. Test, M.D. 4/11/2014 14:59:04

Received: 11 Apr 2014 14:17 **Reported:** 11 Apr 2014 14:59

QA Environment

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R1059157	R1059157	,			
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REVISED REPORT

Masson's Trichrome ST for Conn Ts MCR

Performed

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Periodic Acid-Schiff (PAS) ST MCR

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Jones' Methenamine Silver ST MCR

Performed

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