Supplementary Table 1:

Demographic and Clinical Characteristics of Diabetic Patients				
Variable	Normal	Slow Progresion <0.6cc/min/m	Fast >0.6cc/min/m	CKD5
	N=12	N=13	N=13	N=8
Male sex - no (%)	7(58)	5(38)	6(46)	3(37)
Age (years)	50.3±21.0 b	63.0±10.9 b	55.2±13.4 b d	57.8±8 b
HTN	6(50)	13(100) a	13(100) a	8(100) a
DM	3(25)	13(100) b	13(100) b	8(100) b
ACE inhibitor or ARB	1(12.5)	9(69) b	10(76) b	5(100) b
Statin	4(33)	8(61) b	8(61) b	3(60)
Fibrate	0(0)	0(0)	0(0)	0(0)
BP on addmision	126/75±26/12	151/81±16/10	151/86±24/13	161/81±8/8
Serum creatinine - mg/dl	0.9±0.3	1.5±0.5 a h	2.1±1.3 a h	5.2±1.1 a
Serum urea — mg/dl	39.2±14.7	73.3±20.3 a h	85.6±44 a h	169±57.9 a f
Estimated GFR-ml/min/1.73m²	97.4±29.5	46.8±20.3 a f	51.4±36.1 a f	10.4±3.2 b f
Glycated hemoglobin %		7.4±1.3	9.0±2.5	9.7±3.7
Plasma LDL-c mg/dl	115.2±27.2	106.2±44.1	131.7±89.6	133.3±35.1
plasma-HDL-c mg/dl	51.7±17.1	49.8±12.0	52.6±18.8	40.1±14.9
plasma-TG mg/dl	154.0±66.4	355.8±449.4	243.7±215.9	161.0±31.3
Serum albumin - mg/dl	4.1±0.5	3.4±0.7 a	3.2±0.5 a	3.5±0.3 a
Proteinuria mg/day (median)	0	3000a	6543a	2900a
weight kg	62.2±17.5	97.5±23.6	78.7±27.9	83±15.1
Histology				
glomeruli number	29.4±8.9	17.4±9.6a	24.1±9.0	34.8±35.6
Globally sclerotic glomeruli(%)	1.9±3.0	23.8±20.4a	35.9±28.7a	49±35.6a
Segmentally sclerotic glomeruli(%)	0.0	11.3±13.0 b	24.1±24.9 b	21.6±15.8 b
Increased mesangial matrix	0.3±0.4	1.6±0.8	2.1±0.7 b	2.2±0.8 b
Bowman's capsule thickening	0	1.9±0.4 b	1.7±0.5 b	2±0 b
Tubular atrophy (%)	0	1.4±0.5 b	1.7±0.5 b	2.2±0.8 b
Interstitial fibrosis (%)	0	1.2±0.6 b f	1.5±0.5 b f	2.1±0.6 b
Vascular sclerosis	0.1±0.35	1.5±0.8e f	2.8±0.4 b d f	2.6±0.4 b d
interstitial inflammation	0	1.0±0.5 b	1.8±0.9 b d	1.6±1.1 b d

Data are means ± SD or n (%). eGFR was calculated using the Modification of Diet in Renal Disease formula.
Student t test was used to determine the statistical significance between groupse .

The degree of sclerosis, thickening, and fibrosis were evaluated on the basis of an arbitrary scale
(0 = normal = 0%, 1 = mild =,20%, 2 = moderate =20–40%, and 3 = severe = .40%)
and was taken from routine pathological evaluations
Vascular sclerosis: 0 = normal; 1 = mild; 2 = moderate; and 3 = severe.   a P < 0.05 vs Normal
Lumen cells and lumen thrombi: 0 = normal and 1 = increased.   b P < 0.001 *vs* Normal
Mesangial matrix: 0 = normal; 1 = focal; 2 = increased, mild; and 3 = increased,nodular.   d P < 0.01 vs Slow vs fast
Bowman's capsule thickening: 0 = normal; 1 = focal; 2 = circumferential   e P < 0.05 vs CKD5
Interstitial fibrosis 0-no inflamation 1-mild 2-severe.   f P < 0.05 vs CKD5
interstitial inflammation 0-no inflamation 1-mild 2-severe.   h P < 0.001 vs CKD5

Supplementary Table 2: Primer Sequences used for RT-QPCR

	Forward primer sequences	Reverse primer sequences
mTGR5	5'-TGCTTCTTCCTAAGCCTACTACT	5'-CTGATGGTTCCGGCTCCATAG
mSIRT1	5'-TGATTGGCACCGATCCTCG	5'-CCACAGCGTCATATCATCCAG
mSIRT3	5'-GAGCGGCCTCTACAGCAAC	5'-GGAAGTAGTGAGTGACATTGGG
mERRα	5'-CAGGGAGGGAAGGGATGG	5'-TGAGGAGAGGAGCGAAGG
mNrf-1	5'-AGTATGCTAAGTGCTGATGAAGAC	5'-GCTGCCGTGGAGTTGAGG
mNrf-2	5'-CTTTAGTCAGCGACAGAAGGAC	5'-AGGCATCTTGTTTGGGAATGTG
mDGAT1	5'-CTGATCCTGAGTAATGCAAGGTT	5'-TGGATGCAATAATCACGCATGG
mPPARα	5'-TCGCTATCCAGGCAGAAGG	5'-AACAACAACAATAACCACAGACC
mUCP2	5'-CAGCGCCAGATGAGCTTTG	5'-GGAAGCGGACCTTTACCACA
mCPT1b	5'-TGTTAGAGAACGATAAGG	5'-CGCATTATTCAAGAAGAG
hSOD2	5'-CTGGAACCTCACATCAAC	5'-GTACTTCTCCTCGGTGAC
hLCAD	5'-AAGTGATGTTGTGATTGTAGTTG	5'-GAATAGTTCTGCGGTATCCTG
hCPT1b	5'-ATCTTCTTCTTCCGCCAAA	5'-GGTCAAGTTGCTGGTCTT
hPPARα	5'-CAGATGCCACCAGGAGAAC	5'-TGAGGAGACCACAGGAACC