**Supplementary Table 1: Baseline clinical characteristics of patients.**

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| **Variables** | **Overall****(*N* = 181)** | **Non-rapid decliners****(*n* = 73)** | **Rapid decliners****(*n* = 108)** | ***P*-value** |
| **eGFR slope >−5 (mL** ⋅ **min−1** ⋅ **1.73 m−2** ⋅ **year−1)** | **eGFR slope ≤−5** (**mL** ⋅ **min−1** ⋅ **1.73 m−2** ⋅ **year−1**) |
| Male sex (%) | 142/181 (79) | 58/73 (80) | 84/108 (78) | 0.93 |
| Age (years) | 51 ± 12 | 51 ± 13 | 50 ± 11 | 0.71 |
| BMI (kg/m2) | 26.0 (23.4, 28.1) | 25.5 (23.5, 27.7) | 26.3 (23.1, 28.7) | 0.47 |
| Duration of diabetes (months) | 126 ± 83 | 114 ± 79 | 134 ± 85 | 0.10 |
| DR (%) | 124/181 (69) | 37/73 (51) | 87/108 (81) | <0.001 |
| Duration of hypertension (months) | 24 (2, 108) | 36 (1, 120) | 24 (6, 84) | 0.93 |
| SBP (mmHg) | 141 ± 16 | 138 ± 16 | 143 ± 16 | 0.04 |
| DBP (mmHg) | 82 ± 11 | 80 ± 10 | 83 ± 12 | 0.15 |
| Proteinuria (g/24h) | 3.8 (2.0, 7.5) | 2.3 (0.8, 4.1) | 5.2 (3.4, 8.1) | <0.01 |
| uACR (mg/mmol) | 2583.8 (1082.8, 4448.3) | 1198.7 (411.8, 2889.1) | 3718.0 (2159.8, 5716.5) | <0.01 |
| Urinary NAG (U/L) | 23.0 (14.0, 44.0) | 30.0 (16.0, 42.5) | 21.0 (12.0, 45.0) | 0.38 |
| Baseline eGFR (mL ⋅ min−1 ⋅ 1.73 m−2) | 51 ± 26 | 53 ± 30 | 49 ± 23 | 0.29 |
| Scr (μmol/L) | 183 ± 94 | 187 ± 110 | 180 ± 81 | 0.64 |
| HbA1c (%) | 6.8 (6.1, 8.1) | 6.6 (6.1, 8.1) | 6.9 (6.1, 8.1) | 0.61 |
| Hemoglobin (g/L) | 115.7 ± 22.1 | 120.1 ± 25.2 | 112.7 ± 19.3 | 0.03 |
| Platelet count (×109) | 208.0 (169.0, 257.0) | 207.5 (168.8, 251.8) | 208.0 (170.0, 261.0) | 0.94 |
| WBC (×109) | 6.8 (5.8, 7.9) | 6.65 (5.8, 8.3) | 6.80 (5.8, 7.7) | 0.52 |
| Serum albumin (g/L) | 33.4 (28.5, 38.1) | 37.8 (30.4, 41.3) | 31.3 (27.8, 35.2) | <0.01 |
| Serum uric acid (μmol/L) | 398.0 (336.6, 466.0) | 393.0 (315.5, 466.3) | 405.0 (348.3, 463.8) | 0.21 |
| TG (mmol/L) | 1.9 (1.9, 2.9) | 2.1 (1.4, 3.0) | 1.7 (1.2, 2.8) | 0.11 |
| LDL-cholesterol (mmol/L) | 2.8 (2.1, 3.6) | 2.7 (2.0, 3.4) | 2.9 (2.1, 3.8) | 0.20 |
| HDL-cholesterol (mmol/L) | 0.9 (0.8, 1.1) | 0.9 (0.8, 1.1) | 1.0 (0.8, 1.1) | 0.08 |
| Serum C3 | 0.9 (0.8, 1.0) | 0.9 (0.8, 1.1) | 0.9 (0.8, 1.0) | 0.47 |
| Serum C4 | 0.3 ± 0.2 | 0.3 ± 0.1 | 0.3 ± 0.2 | 0.28 |
| RAAS inhibitors (%) | 119/181 (66) | 45/73 (62) | 74/108 (69) | 0.43 |
| Lipid-lowering drugs (%) | 101/181 (56) | 40/73 (55) | 61/108 (57) | 0.94 |
| Follow-up time (years) | 2.1 (1.2, 3.5) | 2.9 (1.6, 4.0) | 1.8 (0.9, 2.8) | <0.01 |
| Kidney endpoint (%) | 114 (63) | 16 (22) | 98 (91) | <0.01 |
| eGFR slope (mL ⋅ min−1 ⋅ 1.73 m−2 ⋅ year−1) | −7.7 (−14.8, −2.0) | −2.0 (−2.4, 0.2) | −13.0 (−25.3, −9.4) | <0.01 |

BMI: Body mass index; DBP: Diastolic blood pressure; DR: Diabetic retinopathy; eGFR: Estimated glomerular filtration rate; Hb: Hemoglobin; HbA1c: Hemoglobin A1C; HDL-cholesterol: High-density lipoprotein cholesterol; LDL-cholesterol: Low-density lipoprotein cholesterol; NAG: *N*-acetylglutamate synthase; RAAS inhibitors: Renin-angiotensin-aldosterone system inhibitors; SBP: Systolic blood pressure; Scr: Serum creatinine; TG: Triglyceride; uACR: Urinary albumin-to-creatinine ratio; WBC: White blood cell.

The data of proteinuria and LDL-cholesterol were missed in 4 and 13 patients, respectively. Data were shown as mean ± SD, median (IQR), and proportions. Mann–Whitney *U* test and the unpaired Student’s *t*-test were used to compare the non-normally and normally distributed continuous data, respectively. Categorical data was assessed by the chi-square test.

**Supplementary Table 2: Baseline histopathological characteristics of patients.**

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| **Variables** | **Overall****(*N* = 181)** | **Non-rapid decliners****(*n* = 73)** | **Rapid decliners****(*n* = 108)** | ***P*-value** |
| **eGFR slope > −5****(mL** ⋅ **min−1** ⋅ **1.73 m−2** ⋅ **year−1**) | **eGFR slope ≤ −5****(mL** ⋅ **min−1** ⋅ **1.73 m−2** ⋅ **year−1**) |
| Glomerular lesions  |
| RPS class (class I–IV) (%)I/II/III/IV | 8 (4)/52 (29)/107 (59)/14 (8) | 8 (11)/29 (40)/35 (41)/6 (8) | 0 (0)/23 (21)/77 (71)/8 (7) | <0.01 |
| K–W nodules (grades 0–1) (%) | 120 (66) | 36 (49) | 84 (78) | <0.01 |
| Subendothelial space widening(grades 0–1) (%) | 40 (22) | 11 (15) | 29 (27) | 0.14 |
| Mesangiolysis/microaneurysm(grades 0–1) (%) | 116 (64) | 29 (40) | 87 (81) | <0.01 |
| Interstitial lesions |
| IFTA (grades 0–3) (%)0/1/2/3 | 2 (1)/40 (22)/73 (40)/66 (37) | 2 (3)/26 (36)/26 (36)/19 (26) | 0 (0)/14 (14)/47 (43)/47 (44) | <0.01 |
| Interstitial inflammation(grades 0–2) (%) 0/1/2 | 2 (1)/54 (30)/125 (69) | 1 (1)/24 (33)/48 (66) | 1 (1)/30 (28)/77 (73) | 0.72 |
| Vascular lesions |
| Arteriolar hyalinosis(grades 0–2) (%) 0/1/2 | 39 (22)/35 (19)/107 (59) | 22 (30)/13 (18)/38 (52) | 17 (16)/22 (20)/69 (64) | 0.07 |
| Arteriosclerosis (grades 0–2) (%)0/1/2 | 7 (4)/105 (58)/69 (38) | 5 (7)/36 (49)/32 (44) | 2 (2)/69 (64)/37 (34) | 0.07 |
| Immunofluorescence |
| IgG deposition (grades 0–3) (%)0/1/2/3 | 39 (22)/76 (42)/56 (31)/10 (6) | 18 (25)/36 (49)/17 (23)/2 (3) | 21 (19)/40 (37)/39 (36)/8 (7) | 0.11 |
| IgA deposition (grades 0–1) (%)  | 49 (27) | 20 (27) | 29 (27) | 1.00 |
| IgM deposition (grades 0–3) (%)0/1/2/3 | 74 (41)/39 (22)/48 (27)/20 (11) | 33 (45)/15 (21)/21 (29)/4 (6) | 41 (38)/24 (22)/30 (25)/16 (15) | 0.23 |
| C3 deposition (grades 0–3) (%)0/1/2/3 | 71 (39)/39 (22)/36 (20)/35 (19) | 28 (38)/20 (27)/12 (16)/13 (18) | 43 (40)/19 (18)/27 (22)/23 (20) | 0.42 |
| C1q deposition (grades 0–2) (%)0/1/2 | 146 (81)/20 (11)/15 (8) | 64 (88)/5 (7)/4 (6) | 82 (76)/15 (14)/11 (10) | 0.15 |
| FRA deposition (grades 0–1) (%)  | 27 (15) | 9 (12) | 18 (17) | 0.56 |
| Alb deposition (grades 0–3) (%)0/1/2/3 | 45 (25)/61 (34)/62 (34)/13 (7) | 23 (32)/24 (33)/23 (32)/3 (4) | 22 (20)/37 (34)/39 (36)/10 (9) | 0.25 |

eGFR: Estimated glomerular filtration rate; IFTA: Interstitial fibrosis and tubular atrophy; IgA: immunoglobulin A; IgG: immunoglobulin G; IgM: immunoglobulin M; K–W nodules: Kimmelstiel–Wilson nodules; RPS class: Renal Pathology Society class.

Data were shown as proportions. Categorical data was assessed by the chi-square test.