Supplementary table 1. Comparison of renal pathological diagnosis between the negative pressure suction puncture group and real-time ultrasound guided needle group

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|  | NPS group (N=520) | RTU group(N=105) | P value |
| Primary glomerular diseases | 356(68.5) | 82(78.1) | 0.05 |
|  MCD | 36(6.9) | 7(6.7) | 0.93 |
|  FSGS | 53(10.2) | 7(6.7) | 0.26 |
|  IgA nephropathy | 148(28.5) | 40(38.1) | 0.59 |
|  MN | 100(19.2) | 23(21.9) | 0.53 |
|  Minor glomerular disease | 9(1.7) | 1(1.0) | 0.56 |
|  MPGN | 3(0.6) | 1(1.0) | 0.52 |
|  Focal glomerulosclerosis | 5(1.0) | 0 | 0.60 |
|  FSPGN | 1(0.2) | 3(2.9) | 0.02 |
|  Crescentic nephritis | 1(0.2) | 0 | 1.00 |
| Secondary kidney diseases | 138(26.5) | 19(18.1) | 0.07 |
|  Lupus nephritis | 32(6.2) | 3(2.9) | 0.18 |
|  AASV, N(%) | 22(4.2) | 1(1.0) | 0.10 |
|  Henoch Schonlein purpura nephritis | 17(3.3) | 2(1.9) |  0.46 |
|  Benign/malignant nephrosclerosis | 15(2.9) | 1(1.0) | 0.25 |
|  Amyloidosis | 11(2.1) | 2(1.9) | 0.89 |
|  Sjogren's syndrome | 7(1.3) | 2(1.9) | 0.66 |
|  Diabetic nephropathy | 7(1.3) | 4(3.8) | 0.08 |
|  Neoplasm | 6(1.2) | 0 | 0.60 |
|  Hepatitis B virus infection | 3(0.6) | 2(1.9) | 0.20 |
|  Anti-GBM nephropathy | 3(0.6) | 0 | 1.00 |
|  Multiple myeloma tubular nephropathy | 3(0.6) | 0 | 1.00 |
|  Infection related glomerulonephritis | 3(0.6) | 0 | 1.00 |
|  Other | 9(1.7) | 2(1.9) | 0.90 |
| Renal tubulointerstitial disease | 20(3.8) | 3(2.9) | 0.62 |
| Hereditary disease/Rare renal disease | 6(1.2) | 1(1.0) | 0.86 |

Values are expressed as number(percentage).

MCD: minimal change disease; FSGS: focal segmental glomerulosclerosis; MN: Membranous nephropathy; MPGN: membranoproliferative glomerulonephritis; FSPGN: Focal segmental proliferative glomerulonephritis; AASV: ANCA-associated systemic vasculitis