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Exploring the Relationship Between Socioeconomic Status and CKD Progression in DM Nephropathy Patients Treated at a Tertiary Center

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**Objectives :** We aim to investigate whether there are differences in CKD progression based on socioeconomic status when DM nephropathy has already developed

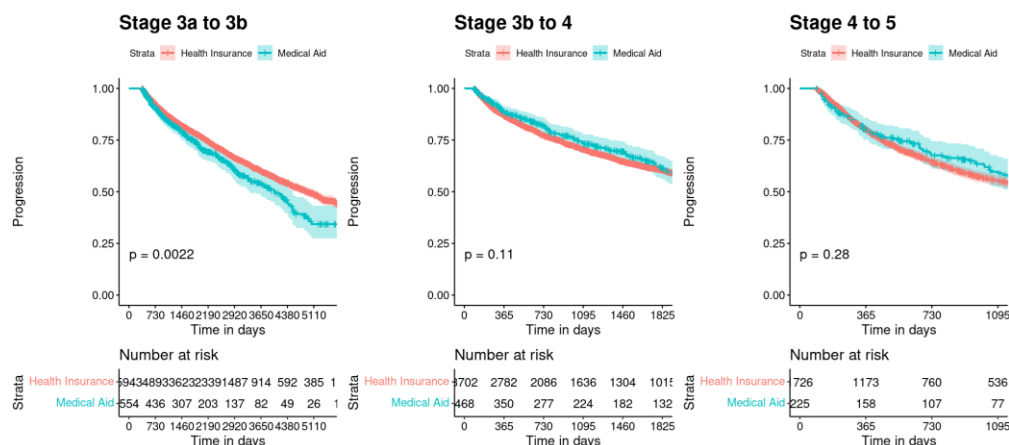
**Methods :** This study was a retrospective observational cohort study from February 1, 2021 to December 31, 2023, focusing on patients who received treatment at Soonchunhyang University and had a diagnosis of diabetes. Due to the unavailability of socioeconomic status data, we compared patient benefiting from South Korea's Medical Aid program, which serves as a form of welfare assistance. We calculate the initial entry into the each CKD stage using creatinine lab datas. We exclude long term loss of follow-up, AKI, Septic shock, Renal replacement therapy, or death.

**Results :** Total 65520 patients during the specified period were included, who were diagnosed as diabetes. Of these, 6497 patients were confirmed to be in CKD stage 3a, with 554 of them were recipients of the medical aid. Among 4170 patients in Stage 3b, 468 were recipients of medical aid, while in stage 4, out of 1951 patients, 225 were under medical aid. There was a significant difference in CKD progression days in stage 3a to 3b, BUT there were no significant difference in stage 3b to 4, 4 to 5 (Figure1). In the 3a to 3b group, significant difference were observed between the group in progression days, the numbers of performed creatinine tests, outpatient visits, and hospitalizations. On the other hand, in the 3b to 4 group, significant difference were only seen in outpatient visits, and in the 4 to 5 group, significant difference were noted in the number of performed creatinine tests, outpatient visits, and hospitalizations (Table1).

**Conclusions :** In the progression from 3a to 3b, the medical aid group exhibited a significant difference in progression. However, no significant difference was observed in the progression from 3b to 4 and from 4 to 5.

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Figure 1. CKD progression curve according to the type of Insurance



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## Table 1. Baseline characteristics

### Stage 3a to 3b

	Health Insurance (N=5943)	Medical Aid (N=554)	p
Days	2167.2 ± 1521.6	2026.3 ± 1476.2	0.037
LabCount	23.3 ± 21.1	27.4 ± 29.9	0.002
OPD	56.8 ± 59.3	75.0 ± 99.6	< 0.001
Admission	3.8 ± 5.6	6.2 ± 18.9	0.004

### Stage 3b to 4

	Health Insurance (N=3702)	Medical Aid (N=468)	p
Days	1348.7 ± 1278.7	1392.5 ± 1298.8	0.487
LabCount	23.9 ± 24.2	25.2 ± 23.9	0.267
OPD	44.6 ± 52.0	54.8 ± 66.4	0.001
Admission	3.3 ± 4.8	3.7 ± 4.2	0.069

### Stage 4 to 5

	Health Insurance (N=1726)	Medical Aid (N=225)	p
Days	1004.2 ± 1036.7	1099.6 ± 1109.9	0.198
LabCount	25.0 ± 24.5	29.8 ± 28.0	0.015
OPD	40.1 ± 50.3	64.2 ± 110.5	0.001
Admission	2.6 ± 4.3	3.5 ± 3.9	0.004