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Correlation between Urine TGF- Levels and Decreased in Kidney Function in Type-2 Diabetes Mellitus Patients: A Non-Invasive Marker Candidate.

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Objectives : The aim of this study is to observe the correlation between TGF-ß levels in urine and the decline in kidney function in Type-2 Diabetes Mellitus (DM) patients with DN.
Methods : This study is a cross-sectional study involving 60 Type-2 DM patients who have been diagnosed for at least 5 years and are aged between 30 and 60 years old. The diagnosis of DN is based on an albumin-to-creatinine ratio ≥ 30 mg/g from a random urine sample quantified using the ELISA method. Subsequently, the correlation between urine TGF-ß and markers of kidney dysfunction is analyzed using the Spearman rank test.
Results : The correlation analysis between urine TGF-ß and two kidney dysfunction markers showed significant correlations with the albumin-to-creatinine ratio (r=0.539; p< 0.01) and GFR (r=-0.590; p<0.01).
Conclusions : Statistical analysis reveals a positive correlation between urine TGF-ß and the degree of proteinuria (albumin-to-creatinine ratio) and a negative correlation between urine TGF-ß and GFR. Urine TGF-ß levels correlate with the degree of kidney dysfunction in Type-2 DM patients.

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Chart 1: Distribution of Respondents Based on Urinary TGF-β1

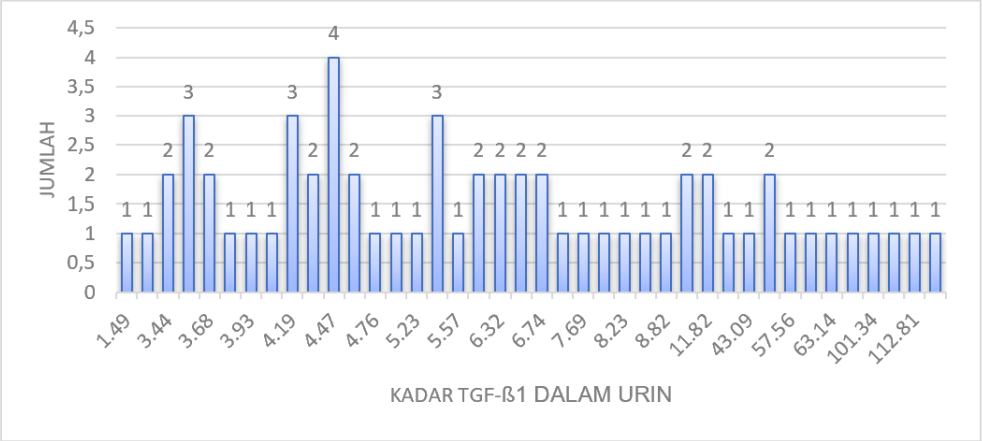

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Table 1: Relationship between ACR and Urinary TGF-β1

Kategori PGD kriteria KDIGO	Kadar rerata TGF-β1 (ng/ml)	%	Nilai P
A1	11,82 ± 1,49	33,33%	0,000
A2	110,37 ± 3,44	33,33%	
A3	452,57 ± 4,19	33,33%	