

## Prevalence of Microalbuminuria in Recently Diagnosed Type 2 Diabetes Mellitus and its Relationship to Non-Traditional Risk Factors: Observations from the ADOPT Study

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**Background and Aims:** This study assessed the prevalence of microalbuminuria (MA), a risk factor for cardiovascular (CV) disease and early mortality in type 2 diabetes mellitus (T2DM).

**Materials and Methods:** The prevalence and associations of MA, defined as albumin:creatinine ratio (ACR) > 30 mg/g, were studied in 4,134 drug-naive T2DM patients (FPG ≤ 9.99 mmol/l) diagnosed within 3 years upon entering a randomised double-blind comparative drug intervention trial (ADOPT). **Results:** The overall prevalence of MA was 15.2% and was independent of disease duration or age. Patients diagnosed with MA (MA+) were more frequently male, significantly more obese ( $P < 0.0001$ ), and had a significantly higher white blood cell count (WBC) ( $P < 0.001$ ). Additionally, MA+ patients had higher blood pressure (BP) and prevalence of hypertension (HTN), as well as worse metabolic control than patients with normoalbuminuria (MA-).

Risk Factor	MA+	MA-	P-value
ACR, mg/g	87.2, 43–138	4.0, 3.5–10.0	
Male, %	62.5	57.3	0.0148
Age, yr	56.5 ± 10.6	56.6 ± 9.9	NS
Waist circ, cm	108.6 ± 14.8	104.8 ± 14.5	< 0.0001
HbA <sub>1c</sub> , %	7.5 ± 0.99	7.3 ± 0.92	< 0.0001
FPG, mmol/l	8.64 ± 1.59	8.39 ± 1.45	< 0.0001
Systolic BP, mmHg	137.0 ± 16.4	132.1 ± 15.2	< 0.0001
Diastolic BP, mmHg	81.1 ± 9.3	79.4 ± 8.7	< 0.0001
Dx HTN <sup>+</sup> *, %	83.3	76.3	< 0.0001
WBC x 10 <sup>9</sup> /l	7.1	6.5	< 0.001

Mean ± SD, or Geometric Mean, IQR for ACR, \*prior diagnosis of HTN or BP ≥ 130/85

Treatment with ACE inhibitors and/or All receptor blockers was also more frequent in MA+ (21.5%) vs MA- (17.7%) patients ( $P < 0.024$ ). LogACR significantly correlated with HbA<sub>1c</sub> ( $r = 0.056$ ,  $P = 0.0004$ ), FPG ( $r = 0.054$ ,  $P = 0.0006$ ), SBP ( $r = 0.110$ ,  $P < 0.0001$ ), DBP ( $r = 0.085$ ,  $P < 0.0001$ ) and WBC ( $r = 0.086$ ,  $P < 0.0001$ ). **Conclusion:** This study shows that MA was significantly related to traditional and non-traditional CV risk factors. In this cohort, the prevalence of MA was high, and similar to the 12.3% reported by the UKPDS. This emphasises the need for more aggressive, comprehensive treatment of MA, hyperglycaemia, hypertension and other associated CV risks in T2DM.