

IGF-1: A marker of cardiometabolic risk in sleep apnoea syndrome?

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Introduction and Objectives

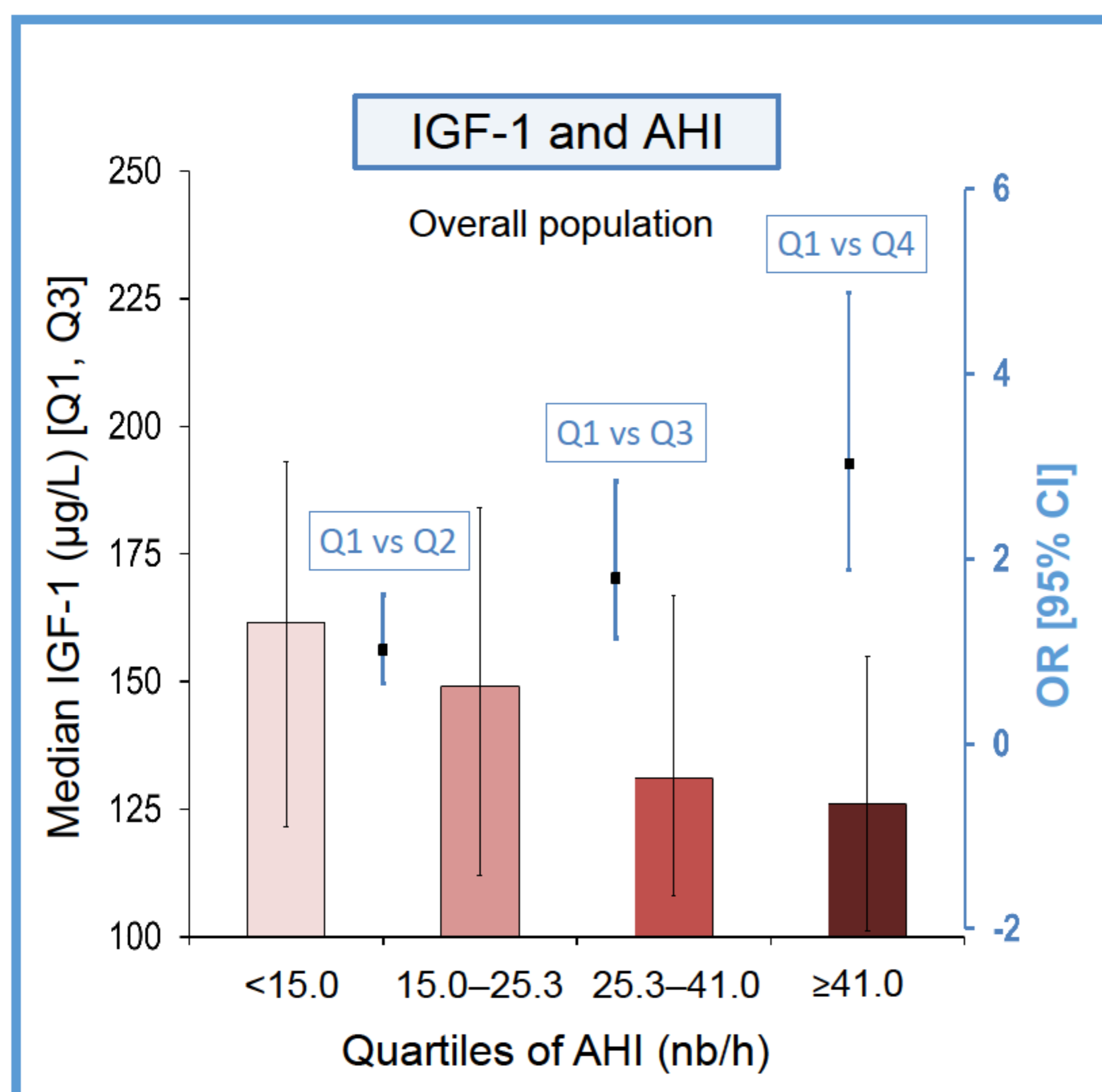
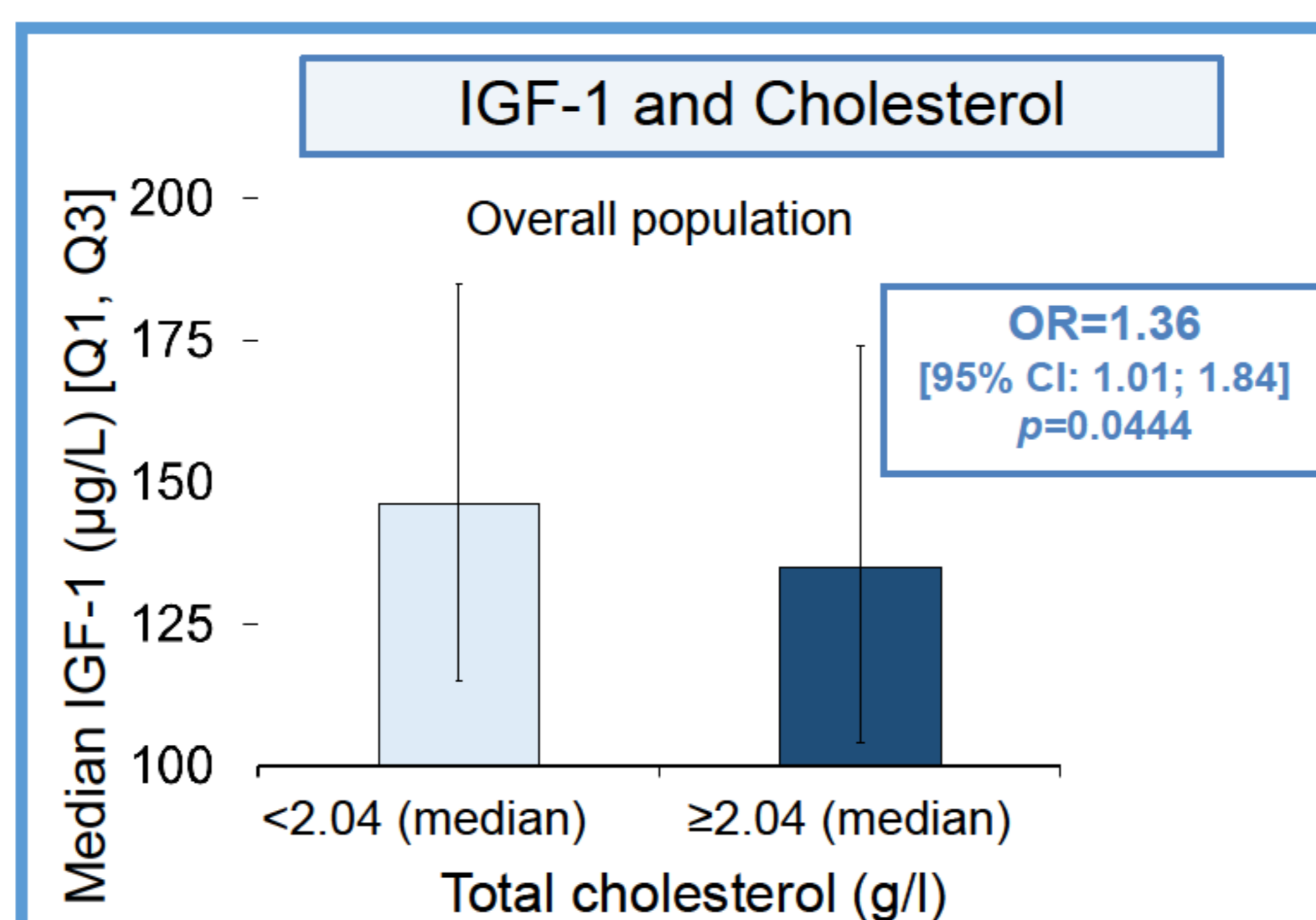
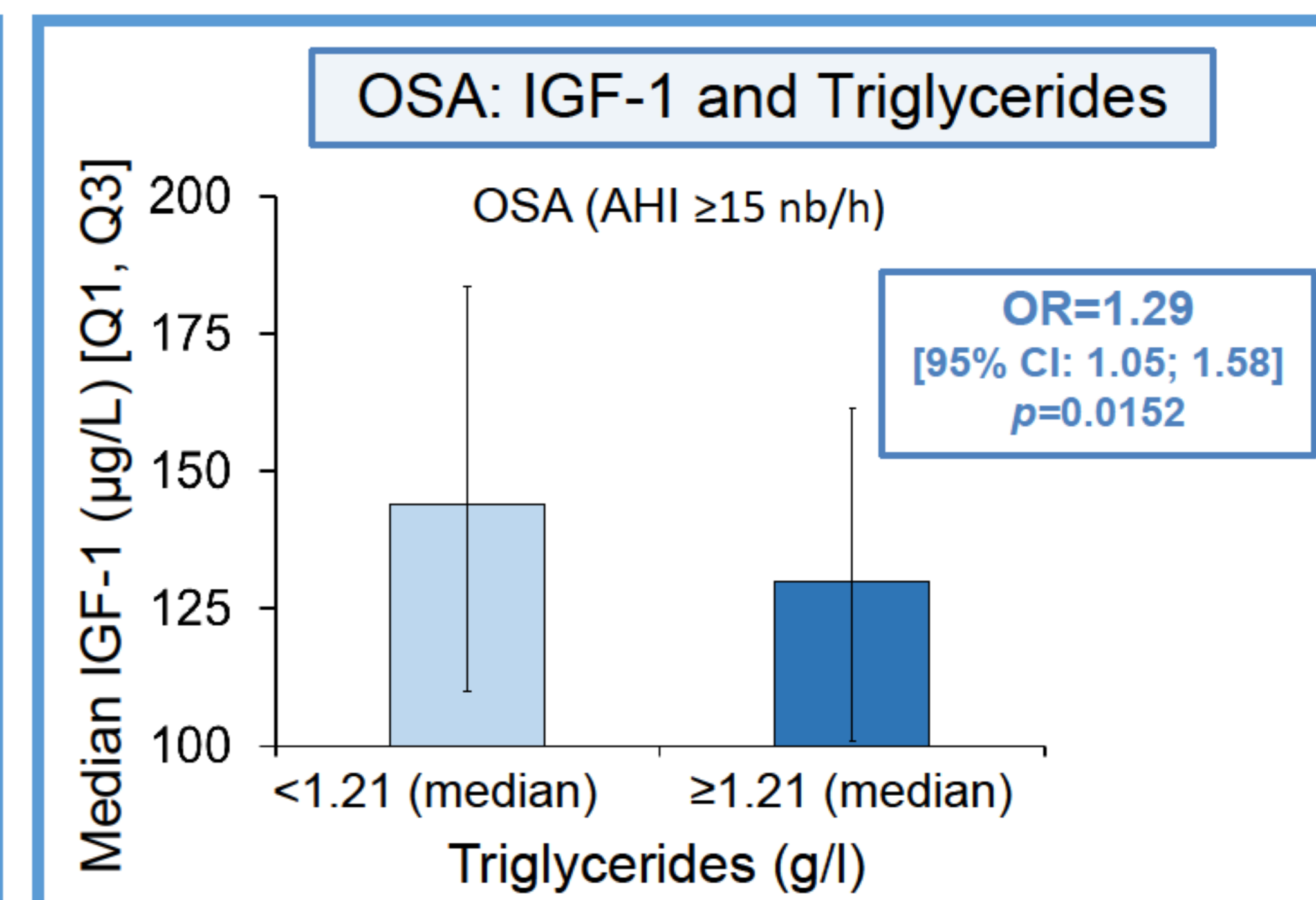
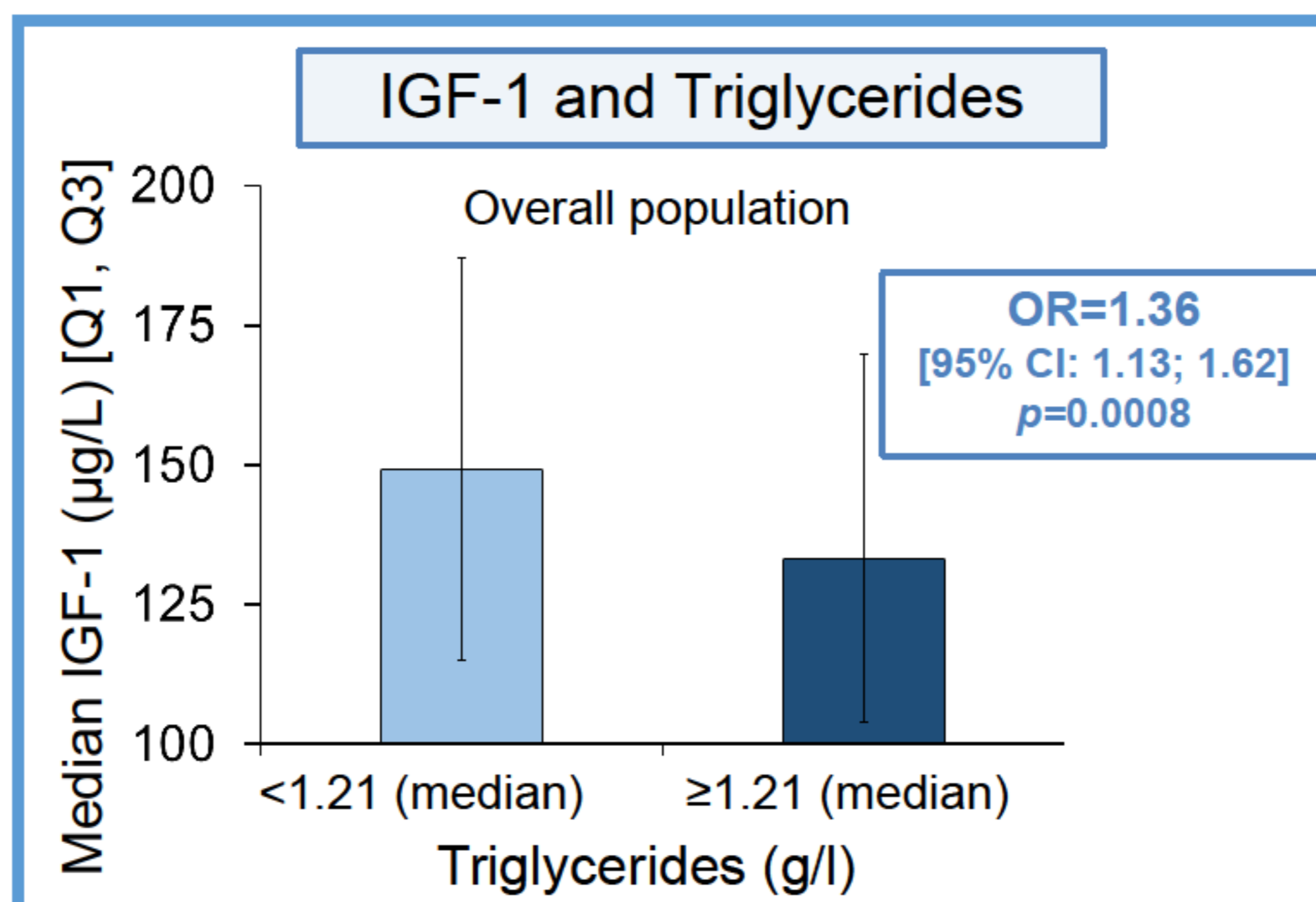
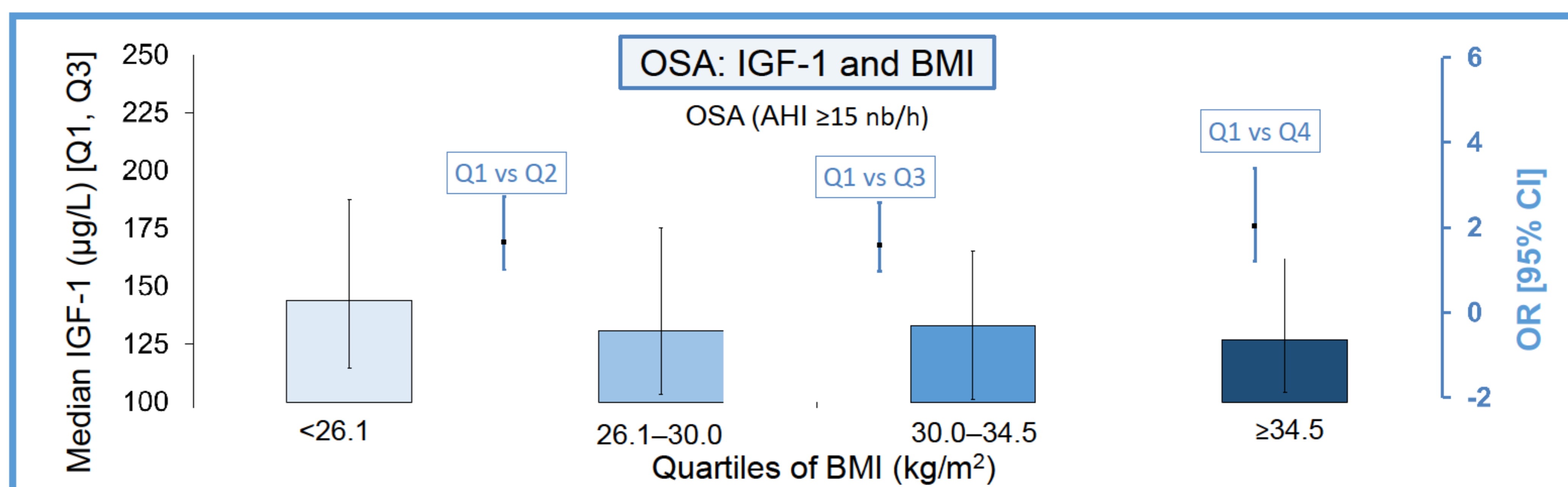
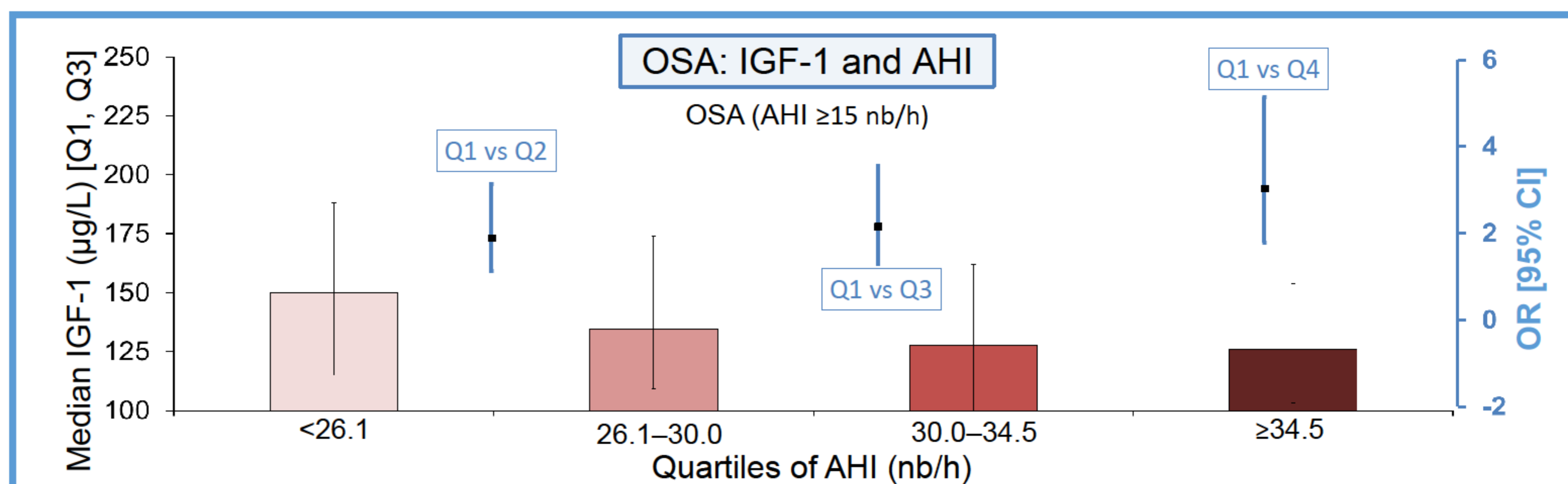
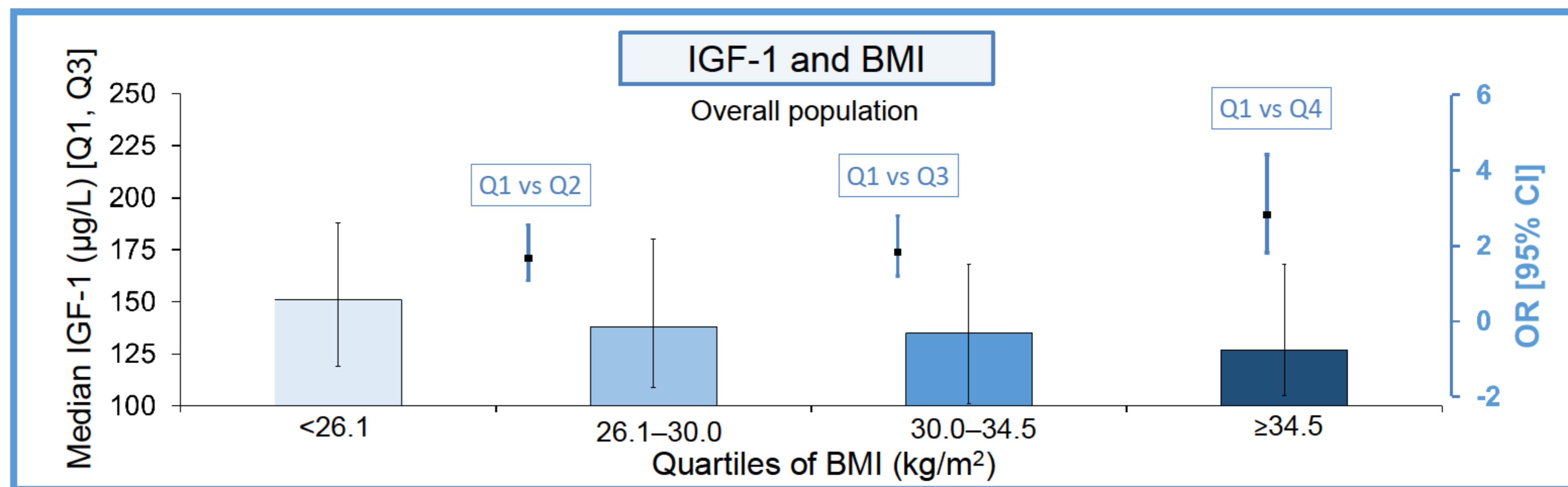
Insulin-like growth factor-1 (IGF-I) is the main growth factor associated with growth hormone (GH). There is a decrease of plasma levels of luteinizing hormone (LH) in obesity. Obstructive sleep apnoea (OSA) alters the functioning of the somatotrophic axis, and nocturnal GH rate is correlated with sleep duration and apnoea-hypopnoea index (AHI). IGF-1 is also known as a cardiovascular protection factor. IGF-1 levels were studied in a large prospective cohort of patients referred for suspicion of OSA.

Methods

In a multicentre national study, 817 patients with suspicion of OSA (OSA confirmed for 567 patients) underwent serum IGF-1 measurements. We analyzed the association of exhibiting IGF-1 below the median value of the population for variables related to cardiometabolic risk, like body mass index (BMI), AHI, cholesterol and triglycerides (expressed in quartile, median or continuous variables). For each variable, we have measured the risk of having IGF-1 < median value.

Results

Median IGF-1 = 138 ng/ml
 Mean age = 52.4 ± 12.7 years
 Male = 63.9%
 Mean BMI = 30.7 ± 6.5 kg/m²
 Mean AHI = 30.9 ± 22.6 events/hour



Conclusions

There is a relationship between low levels of IGF-1 and recognized predictors of cardiovascular risk in OSA. IGF-1 has potentially a role as a prognosis biomarker in OSA patients, and our results also provide insights regarding mechanisms of co-morbidities in these patients.

This study was supported by a research grant from Ipsen

