

Sex-specific differences in modifiable AF risk factors

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Background

Risk factor modification (RFM) is the four pillar of AF management. Sex may modulate traditional AF RFs, though less is known about sex-based differences in lifestyle RF distribution and the impact on AF risk.

Aim

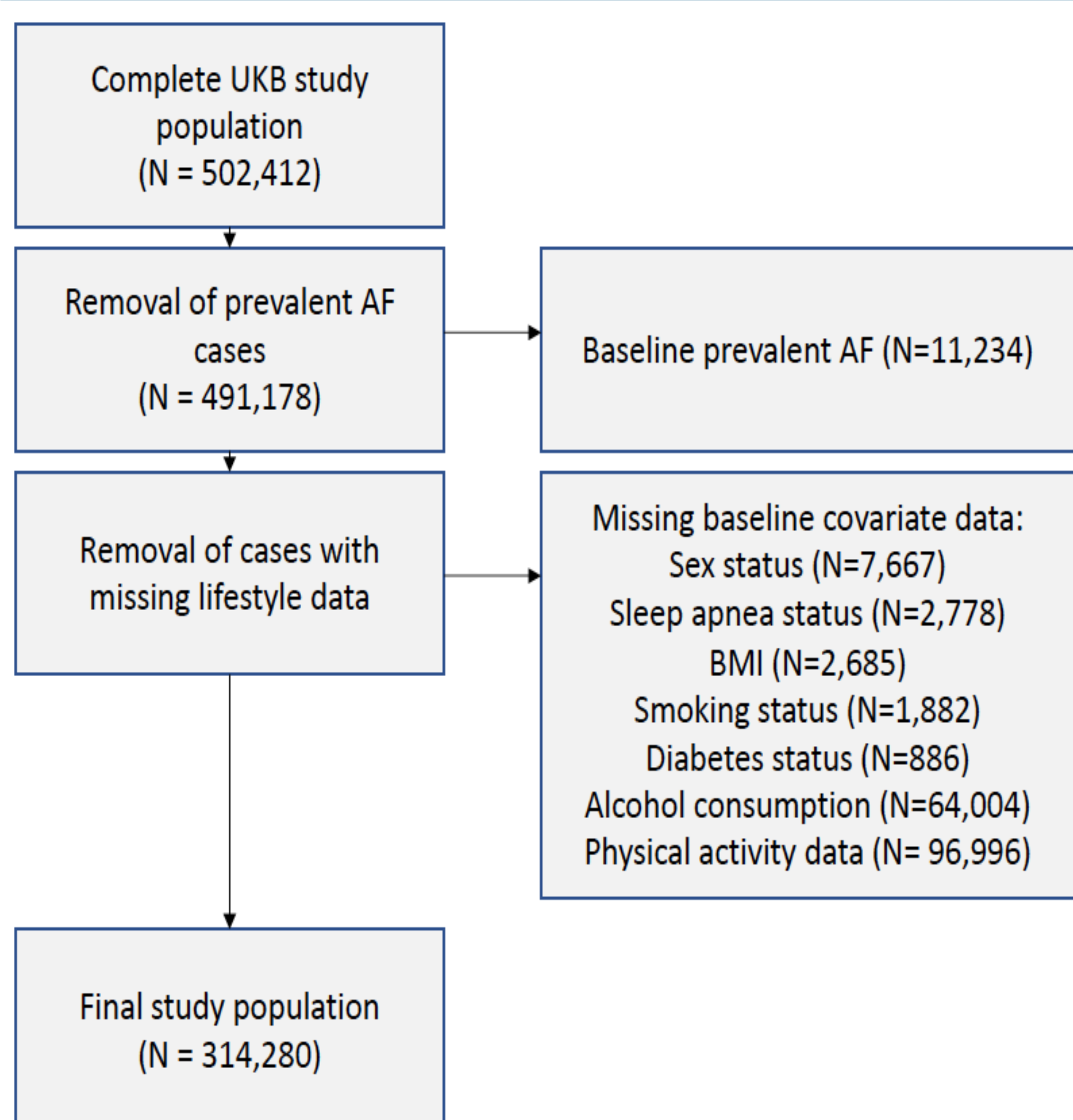
Compare prevalence and impact of lifestyle RFs on incident AF risk among men and women in the UK Biobank (UKB).

Method

The UK Biobank (UKB) is a large prospective cohort with outcomes measured >10 years.

Among the UKB, traditional and emerging AF risk factors were evaluated at baseline.

Cox regression was performed to determine sex-stratified predictors of incident AF risk.



Results

Among 302,617 UKB participants (52% female, age 57(IQR 50-63) years, incident AF occurred in 7.8% of men and 3.7% of women comparable time to AF (7.4 (and 7.9 years, respectively).

Modifiable AF RFs were less frequent in women: hypertension in 64% vs 68% males($p<0.001$), diabetes 6.2% vs 10.9%($p<0.001$), smoking in 47.6% vs 59.6%($p<0.001$), sleep apnoea in 3.0% vs 6.7% ($p<0.001$) and heavy alcohol consumption (≥ 10 standard drinks/week) 40.2% vs 68.4%($p<0.001$). Incident AF was associated with a 4-fold increased mortality risk in both sexes.

Age, hypertension, obesity, smoking and sleep apnoea remained independent RFs among both sexes(all $p<0.001$), diabetes and inactivity were not. Hypertension was associated with a 4-fold increased AF risk. Alcohol consumption was a male-specific RF(OR 1.094, 95% CI 1.038-1.152, $p=0.001$;figure 1).

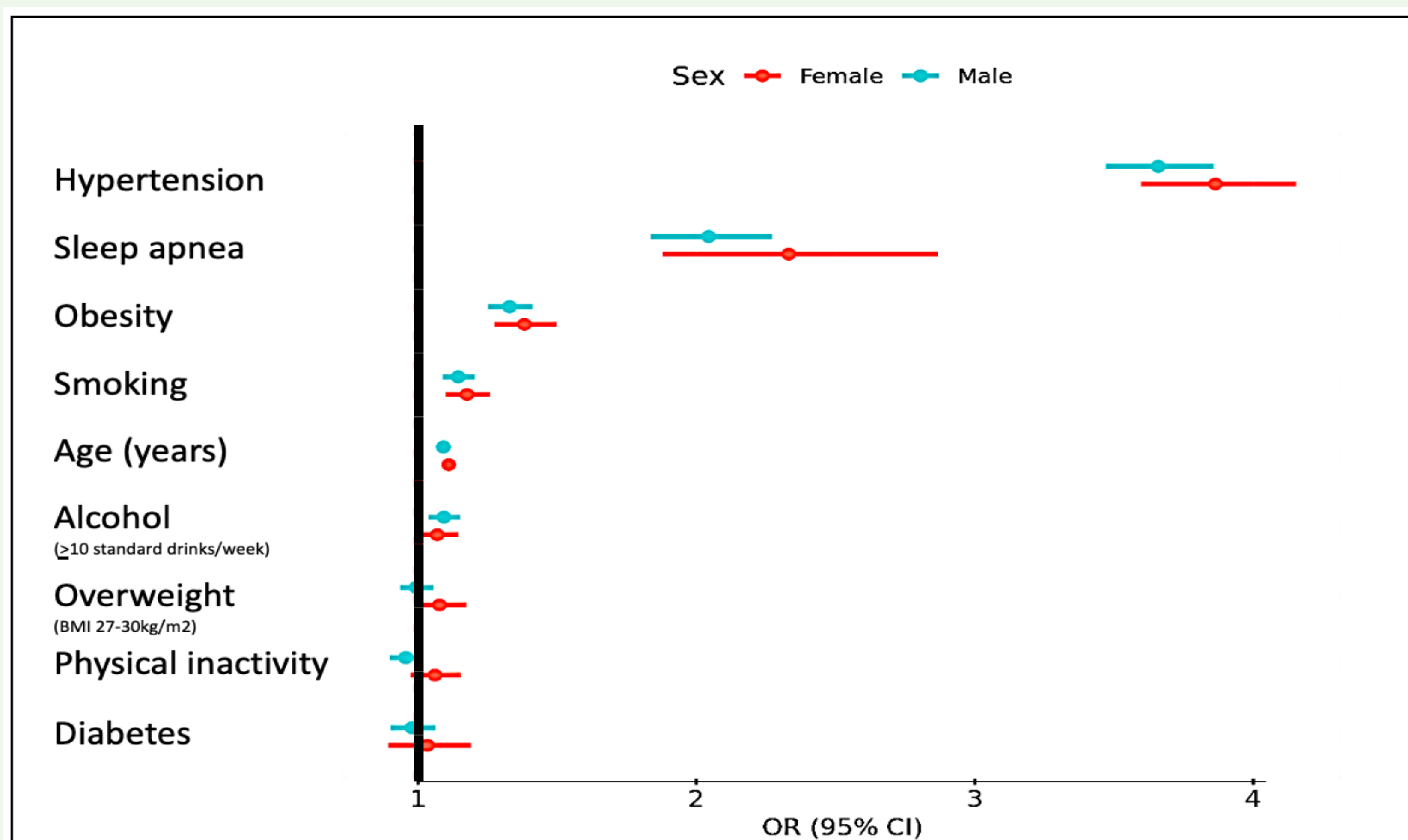


Figure 1: Lifestyle-based predictors of incident AF risk after multivariable adjustment stratified by sex category, with females represented in red and males represented in blue.

Conclusion

Modifiable AF RFs are largely common to both sexes. Though alcohol consumption was more common in men with AF, the impact of lifestyle on AF risk was largely comparable among men and women in the UKB. Further studies in more diverse populations could clarify the impact of sex on targeted modifiable RF management.