Abstract P3568 – Table 1. The association of Apolipoprotein A1 at baseline with the ischemic composite outcome

Biomarker	Biomarker level	n	Events (%/year)	Unadjusted HR (95% CI)	p-value	Adj risk factors HR (95% CI)	p-value	Adj risk factors and biomarkers HR (95% CI)	p-value
Apo A1	≤0.94	3823	299 (4.28)	Reference	<0.0001	Reference	<0.0001	Reference	0.0004
	>0.94–1.1	4521	258 (3.02)	0.71 (0.60–0.84)		0.75 (0.63–0.88)		0.76 (0.64–0.91)	
	>1.1–1.3	3728	198 (2.74)	0.64 (0.54–0.77)		0.69 (0.58–0.83)		0.72 (0.60–0.88)	
	>1.3	2812	128 (2.36)	0.55 (0.45–0.68)		0.62 (0.50–0.77)		0.66 (0.52–0.82)	

with the composite ischemic outcome, HR 0.95 (0.77–1.16, p=0.6132) comparing the same quartile groups. Neither ApoA1 nor ApoB were associated with major bleeding. There was no significant interaction with randomized treatment.

Conclusion: In patients with AF on oral anticoagulation, the level of ApoA1 is independently associated with decreased risk of ischemic cardiovascular outcomes. Investigating therapies targeting dyslipidemia may thus be useful to improve cardiovascular outcomes in patients with AF.

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P3569 | BEDSIDE
Impact of body mass index in newly diagnosed atrial fibrillation in the GARFIELD-AF registry

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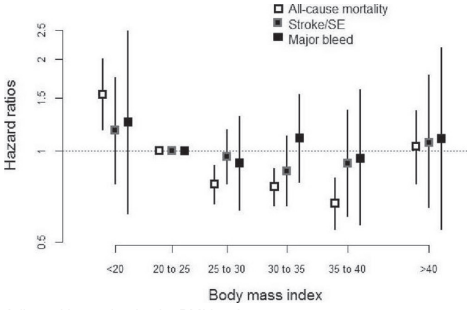
Purpose: To analyze the association of body mass index (BMI) with comorbidities and outcomes of patients with newly diagnosed atrial fibrillation (AF) and ≥1 stroke risk factor.

Methods: 28,628 patients were enrolled from Mar 2010 to Oct 2014 in the prospective GARFIELD-AF registry. BMI data were available for 22,541 patients, stratified as: underweight (3.2%), normal (25.3%), overweight (40.2%), obese (20.1%), and morbidly obese (11.1%).

Results: Increasing BMI was associated with younger age and higher rates of hypertension, hypercholesterolemia, type 2 diabetes, coronary artery disease, and CHF. Underweight patients had the highest prevalence of prior stroke/TIA, bleeding, and moderate-to-severe CKD (Table). The proportion of patients with NYHA class III/IV CHF was similar in both morbidly obese and underweight patients. Obese (vs underweight) patients were more likely to receive oral anticoagulants (67.2% vs 53.2%). Crude 2-yr all-cause mortality per 100 person-years (95% CI) was 8.71 (7.20, 10.53) in underweight, 4.50 (4.10, 4.93) normal, 3.13 (2.77, 3.53) obese, and 2.88 (2.35, 3.53) in the morbidly obese (BMI 35-<40 kg/m^2). The poorer outcomes in underweight patients persisted after adjustment for baseline factors (figure). Half of deaths in the underweight vs 36.2% in patients with BMI ≥40 kg/m^2 were due to non-cardiovascular events.



Adjusted hazard ratios by BMI level

Conclusion: Patients with morbid obesity (and associated metabolic syndrome) are almost 10 yrs younger (median) than patients of normal weight when diagnosed with AF. As BMI increases, mortality paradoxically decreases in GARFIELD-AF. Furthermore, underweight patients are at higher risk of death (vs normal weight patients) in the 2 yrs after AF diagnosis.

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P3570 | BEDSIDE
The instability of body mass index increases new-onset atrial fibrillation and stroke in general population

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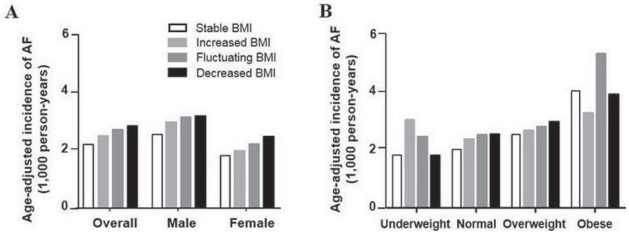
Background: Data are spare regarding the association of stable body mass index (BMI) over the long term with atrial fibrillation (AF) in general population.

Methods: In Korean National Health Insurance Service-Health Screening (NHIS-HealS) cohort, this study included 198,584 adults (118,624 men) without AF more than 40 years of age, who have checked BMI 5 times biannually over 10 years from 2002 to 2011, and evaluated the occurrence of new-onset AF and stroke during follow-up period from 2004 to 2013.

Results: Overall, 69.5% of participants had stable BMI over 10 years, whereas 8.5%, 13.1% and 8.9% of participants had increased, fluctuating and decrease BMI. The age and gender-adjusted incidence of AF over 10 years from 2004 to 2013 was markedly lower among participants with stable BMI (2.18 per 1,000 person-years) compared with those whose BMI increased, fluctuating or decreased (2.47, 2.69, 2.82 per 1,000 person-years respectively; P<0.001). Clinical variable adjusted hazard ratios (HRs) for new-onset AF increased by 14% (p=0.019), 18% (p<0.001) and 17% (p=0.001) in increased, fluctuating and decreased BMI groups, respectively. The age and gender-adjusted incidence of AF-related stroke was markedly lower among participants with stable than those with unstable BMI. Over 10 years, participants with stable BMI had essentially unchanged levels of risk factors, regardless of baseline BMI.

Figure 1. Age and gender adjusted-incidence of new-onset AF by sex (A) or baseline BMI (B) and change in BMI



Conclusion: Maintenance of stable BMI over the long term, regardless of baseline BMI, was associated with markedly lower incidence of AF and AF-related stroke and stable or only minimally adverse changes in its component risk factor levels over time.

P3571 | BENCH
Structural remodelling in a porcine model of rapid atrial pacing and arterial hypertension

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Introduction: Arterial hypertension (HT) is found in most patients with atrial fibrillation (AF) and triggers hypertrophic and profibrotic pathways resulting in struc-

Abstract P3569 – Table 1. Characteristics by BMI at AF diagnosis

	Underweight <20 (n=735)	Normal 20 to <25 (n=5702)	Overweight 25 to <30 (n=9074)	Obese 30 to <35 (n=4520)	Morbidly obese	
					35 to <40 (n=1748)	≥40 (n=762)
Age, yrs, median (IQR)	76 (68 to 82)	73 (64 to 80)	71 (62 to 78)	69 (62 to 76)	67 (61 to 74)	64 (57 to 71)
Hist hypertension, %	57.8	69.6	79.0	86.6	89.0	89.6
Raised cholesterol, %	22.8	31.2	42.7	51.0	52.3	51.1
Type 2 diabetes, %	9.0	14.1	19.7	27.5	34.6	41.6
CAD, %	11.9	18.1	21.9	24.2	24.8	19.6
Mod-to-severe CKD, %	12.1	11.5	9.8	10.0	11.3	11.2
Prior stroke, TIA/bleed, %	14.7/4.1	12.7/2.9	12.3/2.6	9.4/2.6	10.2/3.4	9.6/2.0
CHF [NYHA class III/IV]	23.4 [39.9]	19.4 [31.5]	19.4 [29.5]	24.0 [30.0]	29.1 [35.9]	30.2 [39.2]
CHA2DS2-VASc, mean	3.4	3.2	3.1	3.2	3.4	3.2