Table 1: Univariable incident risk ratio (95% confidence intervals) for factors associate with health service utilisation in the five years following initial gout hospitalisation.

	ED presentations			Hospital admissions		
	All presentations	PPE	Cost	All presentations	PPE	Cost
Age at 1 st presentation	1.00 (1.00, 1.00)	0.96 (0.96, 0.97)	1.01 (1.01, 1.02)	1.01 (1.00, 1.01)	1.04 (1.03, 1.04)	1.03 (1.02, 1.03)
Sex (base: male)	1.32 (1.15, 1.45)	1.22 (0.97, 1.51)	1.28 (1.11, 1.49)	1.34 (1.01, 1.28)	1.60 (1.36, 1.89)	1.24 (1.08, 1.42)
Aboriginality	3.47 (2.90, 4.03)	12.98 (0.80, 17.20)	2.34 (1.75, 2.80)	1.51 (1.25, 1.82)	1.39 (1.07, 1.80)	1.00 (0.79, 1.25)
Socio-economic status (SES)						
- 0 to 20% (lowest SES)	Base	Base	Base	Base	Base	Base
- 21 to 40%	0.53 (0.44, 0.65)	0.29 (0.21, 0.42)	0.68 (0.50, 0.92)	0.90 (0.70, 1.14)	1.03 (0.74, 1.44)	0.99 (0.75, 1.31)
- 41 to 60%	0.45 (0.38, 0.53)	0.10 (0.07, 0.14)	0.70 (0.54, 0.93)	1.16 (0.93, 1.44)	1.06 (0.78, 1.44)	1.24 (0.96, 1.60)
- 61 to 80%	0.37 (0.31, 0.45)	0.10 (0.07, 0.14)	0.56 (0.42, 0.75)	1.01 (0.80, 1.26)	0.97 (0.71, 1.33)	1.07 (0.82, 1.39)
- 81 to 100% (highest SES)	0.27 (0.23, 0.33)	0.02 (0.01, 0.03)	0.48 (0.36, 0.64)	1.12 (0.89, 1.41)	0.85 (0.62, 1.17)	1.23 (0.96, 1.63)
Smoking (ever)	1.79 (1.64, 1.95)	1.78 (1.46, 2.16)	1.68 (1.48, 1.92)	1.53 (1.38, 1.70)	2.12 (1.82, 2.46)	1.48 (1.31, 1.67)
Comorbidities						
- CVD	1.87 (1.71, 2.03)	0.87 (0.72, 1.06)	2.37 (2.09, 2.69)	3.06 (2.78, 3.38)	6.60 (5.71, 7.64)	2.68 (2.39, 3.01)
- Diabetes	1.74 (1.59, 1.92)	1.39 (1.12, 1.71)	1.83 (1.59, 2.11)	2.43 (2.18, 2.71)	4.02 (3.48, 4.64)	1.84 (1.62, 2.11)

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POS1148

RISK FACTORS FOR POLYARTICULAR GOUT FLARES—ANALYSIS OF A LONGITUDINAL ONLINE GOUT FOLLOW-UP STUDY

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Background: There are known and established risk factors for gout flares; however, no study has examined the factors specifically associated with a polyarticular gout flare.

Objectives: Evaluate risk factors of a polyarticular gout flare in a longitudinal study of individuals with gout.

Methods: We used data from the Boston Online Gout Study, a longitudinal internet-based case-crossover study, where gout patients with at least one flare within the past year were enrolled across the US. Participants (N=903) were followed prospectively for 1 year via the internet to collect information on gout flares and related data including number and specific joints involved, medical comorbidities, diet, exercise and medications.

A polyarticular gout flare was defined as having 3 or more joints involved during a patient-reported flare period. Individuals with at least one flare (to determine flare pattern) during follow-up were included in the analysis. Univariable associations were first assessed to determine factors were associated with polyarticular joint flares. was used to adjust for confounders. When assessing the association of each risk factor with prevalent polyarticular joint involvement, we used multivariable logistic regression, adjusting specific confounders guided by causal diagram.

Results: There were 724 participants with at least one flare with a mean and median age of 55 years. The cohort was 78% male and 89% White with a mean gout disease duration of 8.1 years (median 5). 197 (27%) had a polyarticular gout flare. In univariable analysis (Table 1), female sex, osteoarthritis, obesity, heart failure, hypertension, chronic kidney disease and gout related medication use were each associated with higher odds of polyarticular gout flare, whereas higher education, alcohol use at study enrollment and aspirin use were associated with lower odds. In multivariable analysis, obesity, osteoarthritis and heart failure remained associated with a higher odds of polyarticular gout flare, whereas education remained inversely associated.

Conclusion: In this prospective cohort of gout patients, obesity, heart failure and osteoarthritis were independently associated with higher odds for polyarticular gout flares. Female sex was also positively associated, whereas higher education was protective. The positive association with gout-related medications likely reflects residual confounding by indication. If confirmed, these findings would help identify those at risk for polyarticular flares to help improve clinical care.

Table 1. Associations with Polyarticular Gout Flare (≥ 3 joints)

Risk Factor		Univariable OR (95% CI)	Age- and Sex-Adjusted OR (95% CI)	Multivariable OR* (95% CI)
Age ≥ 55 years (vs < 55)		0.82 (0.59, 1.14)	0.77 (0.56, 1.08)	0.70 (0.49, 1.01)
Female Sex		1.51 (1.04, 2.22)	1.55 (1.03, 2.32)	1.21 (0.78, 1.88)
White Race (vs Non-White)		0.89 (0.54, 1.48)	0.93 (0.56, 1.54)	0.75 (0.44, 1.28)
Education (vs High School or Less)	Some college	0.63 (0.37, 1.07)	0.53 (0.37, 1.07)	0.68 (0.39, 1.17)
	College	0.45 (0.25, 0.78)	0.46 (0.26, 0.81)	0.49 (0.27, 0.88)
	Post-graduate	0.42 (0.25, 0.72)	0.44 (0.26, 0.76)	0.48 (0.28, 0.84)
Body Mass Index (kg/m ²) at Enrollment (vs < 25)	25-29.9	1.69 (0.85, 3.33)	1.77 (0.89, 3.51)	1.82 (0.90, 3.65)
	≥ 30	2.38 (1.24, 4.58)	2.30 (1.19, 4.43)	2.19 (1.12, 4.28)
Alcohol Use at Enrollment (vs. Non-Use)		0.60 (0.40, 0.89)	0.60 (0.40, 0.91)	**
Gout Duration ≥ 5 years (vs < 5)		0.85 (0.61, 1.18)	0.93 (0.66, 1.31)	0.95 (0.66, 1.35)
Presence of Comorbidities at Enrollment (vs Absence)	Osteoarthritis	2.35 (1.45, 3.81)	2.37 (1.43, 3.95)	2.39 (1.42, 4.04)
	Heart Failure	2.06 (1.11, 3.81)	2.21 (1.17, 4.17)	2.03 (1.06, 3.91)
	Hypertension	1.61 (1.08, 2.40)	1.69 (1.10, 2.60)	**
	Chronic Kidney Disease	1.97 (1.03, 3.78)	2.11 (1.09, 4.11)	**
Medication Use at Enrollment (vs No Use)	Allopurinol	1.58 (1.13, 2.22)	1.59 (1.13, 2.23)	**
	Diuretics	1.53 (1.06, 2.21)	1.59 (1.06, 2.38)	**
	Oral Steroids	2.21 (1.16, 4.18)	2.26 (1.19, 4.31)	**
	Aspirin	0.68 (0.47, 0.98)	0.72 (0.49, 1.07)	**

*Mutually adjusted for the variables in this column**Not included in model

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POS1149

CARDIOVASCULAR RISK STATUS AND OBESITY IN GOUT COMPARED TO HEALTHY MEXICAN SUBJECTS: A CASE-CONTROLS STUDY WITH A PROPENSITY SCORE-MATCHED ANALYSIS

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Background: Atherosclerotic cardiovascular diseases (ASCVD), metabolic syndrome and hyperuricemia due to an increment in their incidence world-wide, but information regarding the 10-year estimated risk in gout vs. healthy subjects is scarce.

Objectives: To assess baseline the 10-year cardiovascular risk and high-risk status in gout patients compared to healthy controls.

Methods: Data from 494 gout paired to controls in a ratio of 1:1 matched with age, sex and body mass index (BMI) and stratified by normal (≤ 24.9 Kg/m²), overweight (25 - 29.9 Kg/m²) and obese (≥ 30 Kg/m²). Controls were asymptomatic subjects attending a preventive clinic in Mexico City. We used the Framingham Risk Score for Coronary Heart Disease (FRS-CHD) and the 2013 American College of Cardiology/American Heart Association (2013 ACC/AHA). Additionally, high risk status was defined according to pre-defined cutoff points for FRS-CHD ($\geq 20\%$) and ACC/AHA 2013 ($\geq 7.5\%$).

Results: Data from 494 gout and 494 controls. Gout patients were male 97.4%, 47 (SD ± 13) years, mean BMI of 28.4 (SD ± 4.31) Kg/m². Age, sex, and BMI and subgroups were equilibrated (p=NS). Gout patients had higher 10-year estimated risk vs. controls nevertheless, only FRS-CHD reached statistically significant difference with 9.38 vs. 7.5 ± 5.74 (p<0.001); For 2013 ACC/AHA 4.94 ± 6.16 vs. 5.23 ± 6.78 , (p=0.49). Further stratification by BMI groups revealed that subjects