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Article

Does pizza consumption favor an improved disease activity in rheumatoid arthritis?

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Supplementary Results

The sensitivity analyses targeted study subjects with either normal blood pressure or not reporting to suffer from gastritis or gastro-esophageal reflux. The derived point estimates generally aligned with those from the corresponding models in the complete-case analysis. The major differences were observed in logistic regression models assessing the effect of dietary habits on SDAI-based disease activity. Specifically, in both sensitivity analyses, the OR for pizza did not reach significance anymore for third vs. first tertile categories of consumption (OR: 0.282, 95% CI: 0.061-1.292 and OR: 0.585, 95% CI: 0.116-2.939 for no gastritis/gastro-esophageal reflux and for normal blood pressure, respectively). The same happened for mozzarella cheese when normal blood pressure participants were considered (OR: 0.463, 95% CI: 0.170-1.263, for III vs. I). On the other hand, the OR of RA activity, as measured by DAS28-CRP, became significant for olive oil: the OR was equal to 0.536 (95% CI: 0.294-0.977), when subjects reported neither gastritis nor gastro-esophageal reflux, vs. an OR of 0.729 (95% CI: 0.443-1.201) in the complete-case analysis, for subjects consuming >1 tablespoon/day (II) vs. ≤1 tablespoon/day of olive oil (I). In the stratified analyses, the wider CIs generally observed included 1 for pizza and mozzarella cheese when DAS28-CRP was considered in participants showing normal blood pressure and RF and/or ACPA positivity. The corresponding estimates were: OR=0.214 (95% CI: 0.042–1.088) vs. OR=0.195 (95% CI: 0.039–0.969) in the complete-case stratum analysis for pizza and OR=0.414 (95% CI: 0.156–1.096) vs. OR=0.369 (95% CI: 0.141–0.968) in the complete-case stratified analysis for mozzarella cheese, when comparing third vs. first tertile categories of consumption. On the contrary, within the same sensitivity analysis and stratum, participants consuming >1 tablespoon/day (II) vs. ≤1 tablespoon/day (I) of olive oil had significantly lower risk of active RA according to DAS28-CRP: OR=0.466 (95% CI: 0.230–0.944) vs. OR=0.537 (95% CI: 0.269–1.071) in the complete-case stratum.

Table S1. Distribution of 365 rheumatoid arthritis patients according to selected characteristics. Italy 2018-2019.

Characteristics	
Age at baseline[1], years, median (IQR)	58.46 (47.81-69.03)
≤55 years, N (%)	155 (42.47)
>55, N (%)	210 (57.53)
Female, N (%)	287 (78.63)
Education[2]	
Primary school, N (%)	49 (13.42)
Middle school, N (%)	79 (21.64)
High school, N (%)	134 (36.71)
University, N (%)	87 (23.84)
Body Mass Index, Kg/m^2, median (IQR)	23.63 (21.00-26.78)
<18.5, N (%)	22 (6.03)
18.5 - 25, N (%)	207 (56.71)
25 - 30, N (%)	94 (25.75)
≥30, N (%)	42 (11.51)
Cigarette smoking status[2]	
Never, N (%)	189 (51.78)
Former, N (%)	118 (32.33)
Current, N (%)	55 (15.07)
Alcohol drinking intensity	
Never, N (%)	106 (29.04)
<1 drink/day, N (%)	194 (53.15)
1 - 2 drinks/day, N (%)	29 (7.95)
≥2 drinks/day, N (%)	36 (9.86)
Disease duration, years, median (IQR)	12.81 (8.08-20.72)
≤5, N (%)	51 (13.97)
5 - 10, N (%)	84 (23.01)
10 - 15, N (%)	76 (20.82)
15 - 25, N (%)	89 (24.38)
>25, N (%)	65 (17.81)
Positivity for **rheumatoid factor**, N (%)	196 (53.70)
Positivity for **anti-citrullinated protein antibodies**, N (%)	186 (50.96)
DAS28-CRP, median (IQR)	2.21 (1.61-3.02)
Remission, N (%)	227 (62.19)
Low activity, N (%)	60 (16.44)
Moderate activity, N (%)	64 (17.53)
High activity, N (%)	14 (3.84)
SDAI, median (IQR)	6.30 (3.01-11.81)
Remission, N (%)	108 (29.59)
Low activity, N (%)	155 (42.47)
Moderate activity, N (%)	81 (22.19)

High activity, N (%)	21 (5.75)
Swollen joint count (0-28), median (IQR)	0 (0-1)
Tender joint count (0-28), median (IQR)	0 (0-2)
C-reactive protein, mg/dL, median (IQR)	2 (0.6-5.57)
General Health (0-100), median (IQR)	70 (60-85)
Physician's Global Assessment (0-10), median (IQR)	2 (0-4)
Comorbidities	
Chronic renal failure, N (%)	4 (1.1)
Arterial hypertension, N (%)	122 (33.42)
Coronary artery disease, N (%)	19 (5.21)
Diabetes mellitus, N (%)	19 (5.21)
Gastro-esophageal reflux disease, N (%)	70 (19.18)
Inflammatory bowel disease, N (%)	2 (0.55)
Gastritis, N (%)	32 (8.77)
Esophagitis, N (%)	5 (1.37)
Presence of any therapy	
Yes, N (%)	30 (8)
No, N (%)	335 (91)
Conventional Synthetic (cs)DMARDs	
Yes, N (%)	118 (34.2)
No, N (%)	247 (65.8)
Biologic (b)DMARDs	
Yes, N (%)	187 (51.2)
No, N (%)	178 (48.8)
Targeted Synthetic (ts)DMARDs	
Yes, N (%)	7 (1.9)
No, N (%)	358 (98.1)
Steroids	
Yes, N (%)	209 (57.3)
No, N (%)	156 (42.7)

[1] Age was calculated as the difference between date of interview and date of birth.

[2] The sum does not add to the total because of a few missing values in education (16 subjects, 4.38%) and cigarette smoking status (3 subjects, 0.82%).

Abbreviations: DAS28-CRP: Disease Activity Score based on 28 joints – C-reactive protein; DMARDS: Disease Modifying Anti-Rheumatic Drugs; IQR: Interquartile range; SDAI: Simplified Disease Activity Index.