Supplementary materials

Table S1. STROBE Statement—Checklist of items that should be included in reports of case-control studies

Table S2. Multivariate logistic regression analysis for identifying independent risk factors of psoriasis complicated with AS

Figure S1. Covariate balance after PSM for psoriasis-related variables

Absolute mean differences of covariates before and after PSM are presented. Covariates included sex, age, BMI, disease course, PASI score, smoking, alcohol consumption, hypertension, diabetes mellitus, and hyperlipidemia.

Figure S2. Propensity score overlaps before and after adjustment

Density plots show the propensity score distribution and overlap between case and control groups before and after propensity score adjustment.

Figure S3. Group comparisons of hemorheological and indicators between case and control group

Box plots comparing hematocrit, RBC aggregation index, fibrinogen, whole blood viscosity (200 s^{-1}, 1 s^{-1}), and plasma viscosity between case and control groups.

$^{**}P < 0.01$, $^{***}P < 0.001$.

Figure S4. Group comparisons of hemorheological and coagulation indicators between case and control group

Box plots comparing D-dimer (ln), platelets, PT, APTT, and fibrinogen between case and control groups.

$^{**}P < 0.01$, $^{***}P < 0.001$.

Figure S5. Comparison of SII and NLR between case and control group

Box plots comparing systemic immune-inflammation index (SII) and neutrophil-to-

lymphocyte ratio (NLR) between case and control groups.

***$P < 0.001$.

Figure S6. Correlation between SII and other indicators between case and control group

Scatter plots showing Spearman correlations between SII and plasma viscosity, hematocrit, RBC aggregation index, and whole blood viscosity at different shear rates in case and control groups.

Figure S7. Mediation pathway of psoriasis inflammation on AS via vascular inflammation and rheology/coagulation dysfunction

Proposed mediation model illustrating the pathway through which psoriasis inflammation contributes to atherosclerosis by affecting vascular inflammation and rheology/coagulation function.

Figure S8. Fibrinogen levels by disease duration subgroups between case and control group

Fibrinogen levels compared among subgroups stratified by disease duration (⩽5 years, 5–10 years, >10 years) in case and control groups.

ns, not significant; ***$P < 0.001$.

Table S1. STROBE Statement—Checklist of items that should be included in reports of *case-control studies*

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	1
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	2
Objectives	3	State specific objectives, including any prespecified hypotheses	2
Methods			
Study design	4	Present key elements of study design early in the paper	2
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	2
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls	2
		(*b*) For matched studies, give matching criteria and the number of controls per case	NA
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	3-4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	3-4
Bias	9	Describe any efforts to address potential sources of bias	4
Study size	10	Explain how the study size was arrived at	4
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	4
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	4
		(*b*) Describe any methods used to examine subgroups and interactions	4
		(*c*) Explain how missing data were addressed	2
		(*d*) If applicable, explain how matching of cases and controls was addressed	NA
		(*e*) Describe any sensitivity analyses	4
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Figure 1
		(b) Give reasons for non-participation at each stage	Figure 1
		(c) Consider use of a flow diagram	Figure 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Table 1
		(b) Indicate number of participants with missing data for each variable of interest	Figure 1
Outcome data	15*	Report numbers in each exposure category, or summary measures of exposure	Table 2
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates	Table 2

		and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	
		(*b*) Report category boundaries when continuous variables were categorized	NA
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	4
Discussion			
Key results	18	Summarise key results with reference to study objectives	5
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	7
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	7
Generalisability	21	Discuss the generalisability (external validity) of the study results	7
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	7

NA, not applicable.

*Give information separately for cases and controls.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.

Table S2. Multivariate logistic regression analysis for identifying independent risk factors of psoriasis complicated with AS

Indicator	OR	95% CI	P	OR (per 1 SD)	95% CI (per 1 SD)	P (per 1 SD)
Hematocrit [%]	0.980	0.934–1.041	0.431	0.644	0.223–2.416	0.431
Whole blood viscosity (200) [mPa·s]	0.026	0.000–2.569	0.120	0.000	0.000–14.477	0.120
Whole blood viscosity (50) [mPa·s]	11.333	0.457–487.878	0.086	6634.003	0.059–5554945341.910	0.086
Whole blood viscosity (1) [mPa·s]	1.752	1.314–2.651	<0.001	424.060	18.942–36850.113	<0.001
Plasma viscosity [mPa·s]	0.031	0.000–6.518	0.222	0.195	0.006–2.422	0.222
RBC aggregation index	3.546	2.105–7.275	<0.001	65.052	11.648–696.234	<0.001
PT [s]	1.422	0.578–3.961	0.393	1.671	0.450–7.423	0.393
APTT [s]	0.861	0.681–1.078	0.187	0.542	0.207–1.363	0.187
FIB [g/L]	0.919	0.522–1.632	0.770	0.897	0.435–1.871	0.770
D-dimer (ln)	0.633	0.311–1.159	0.144	0.553	0.219–1.211	0.144
PLT [×10^9/L]	1.004	0.998–1.012	0.186	1.478	0.827–2.811	0.186

Abbreviations: AS, atherosclerosis; SD, standard deviation; OR: odds ratio; CI, confidence interval; RBC, red blood cell; PT, prothrombin time; APTT, activated partial thromboplastin time; FIB, fibrinogen; PLT, platelet.

Footnote: Analyses were conducted in the propensity score–matched cohort using available data for each variable.

Figure S1.Covariate balance after PSM for psoriasis-related variables

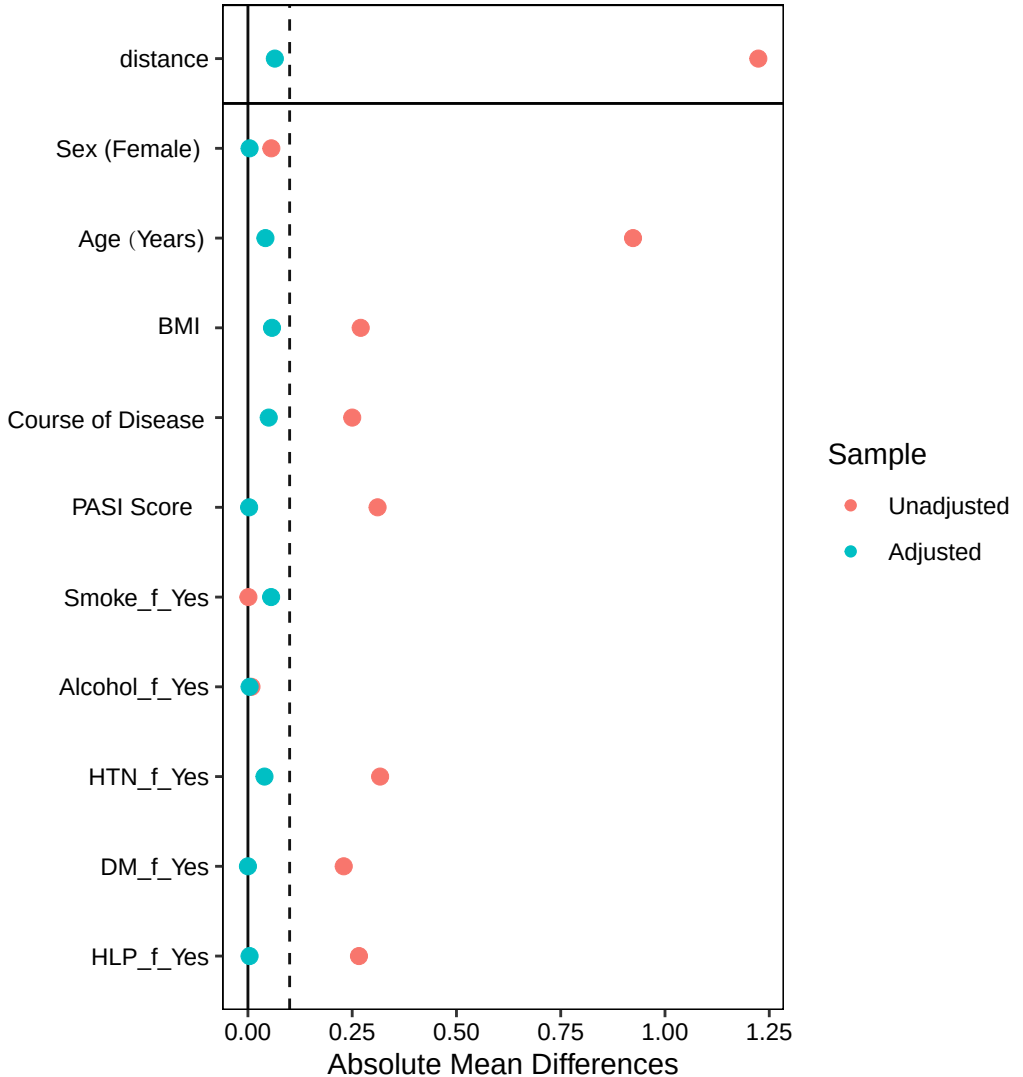

Figure S2. Propensity score overlaps before and after adjustment

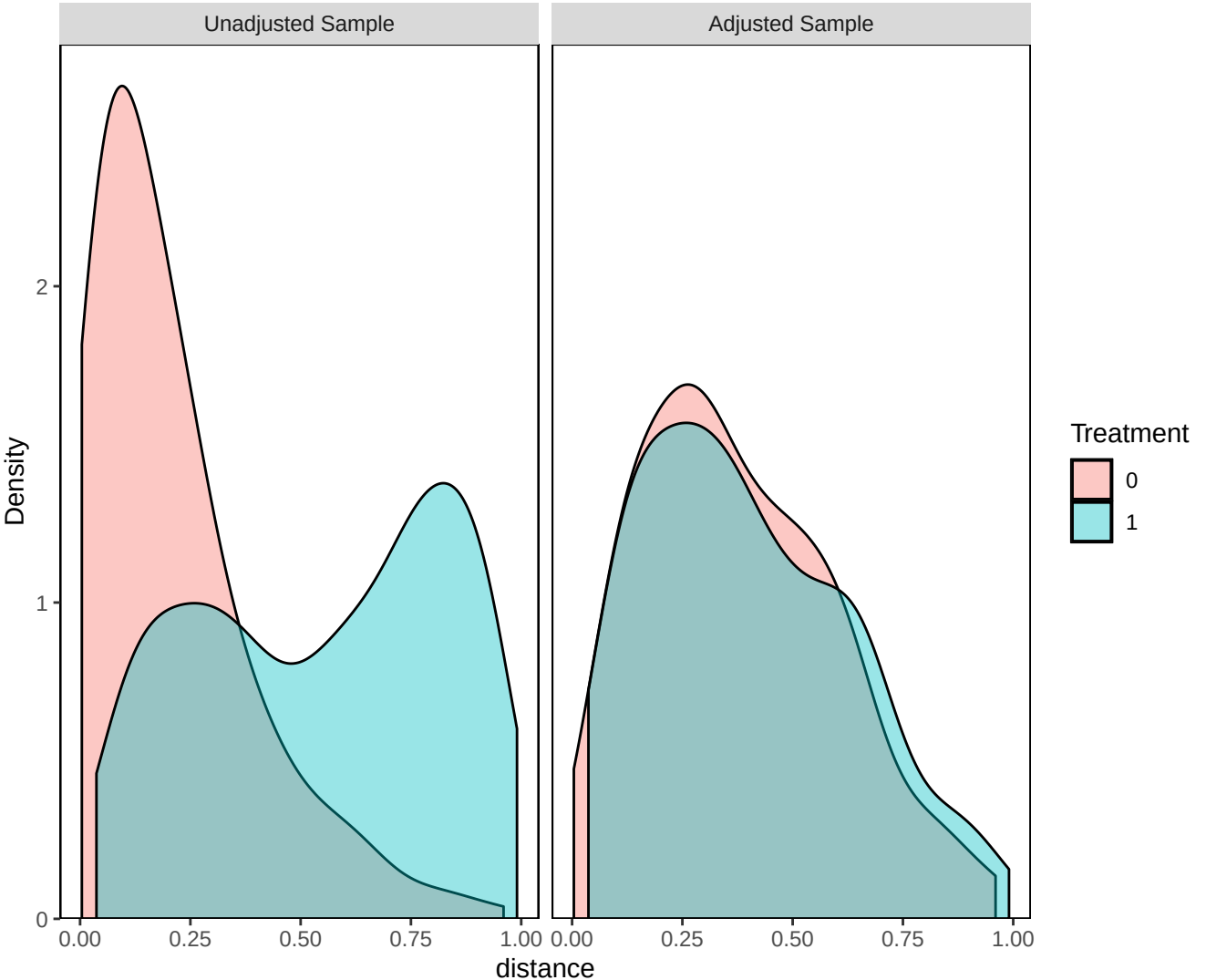

Figure S3. Group comparisons of hemorheological and indicators between case and control groups

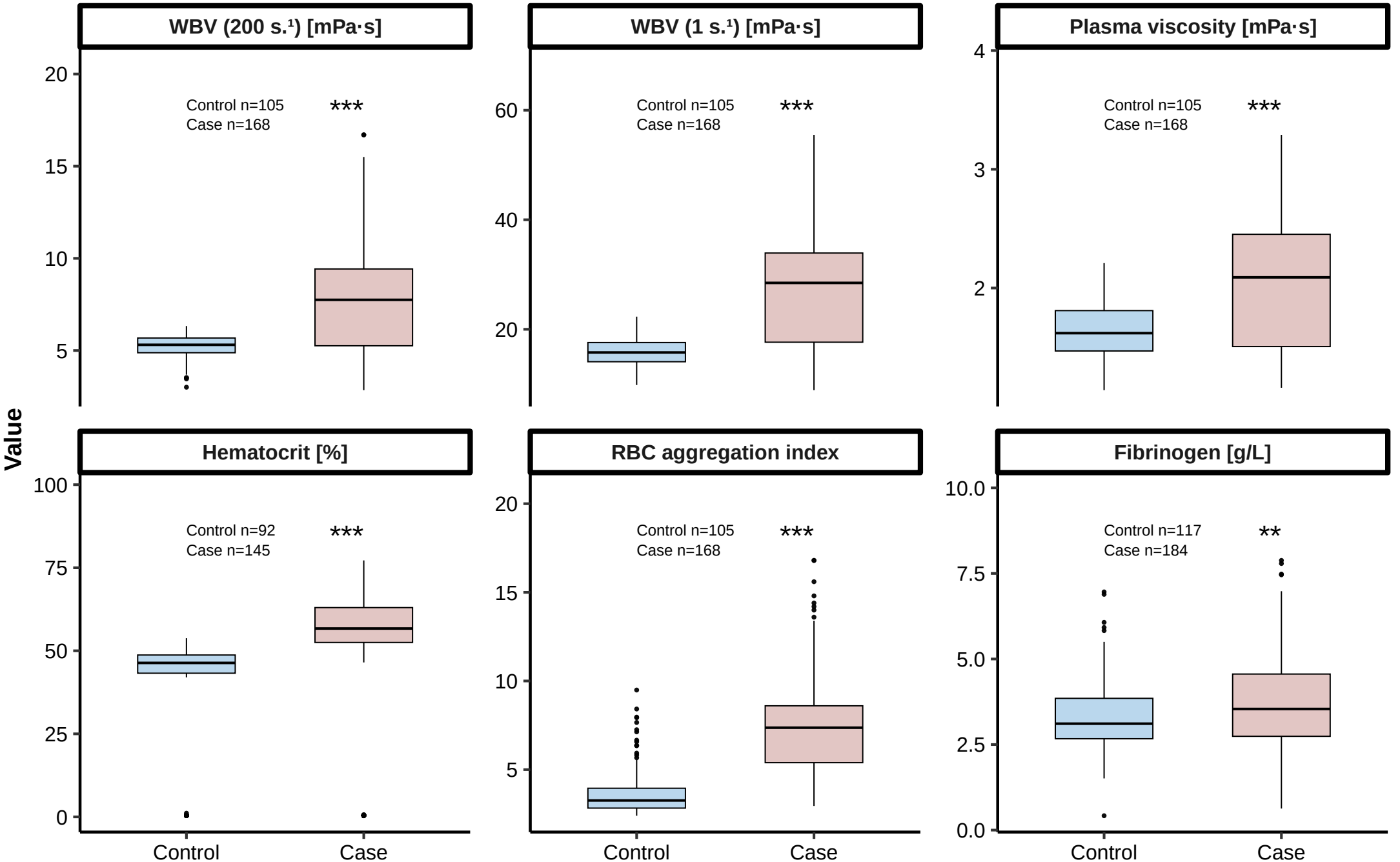

Figure S4. Group comparisons of hemorheological and coagulation indicators between case and control groups

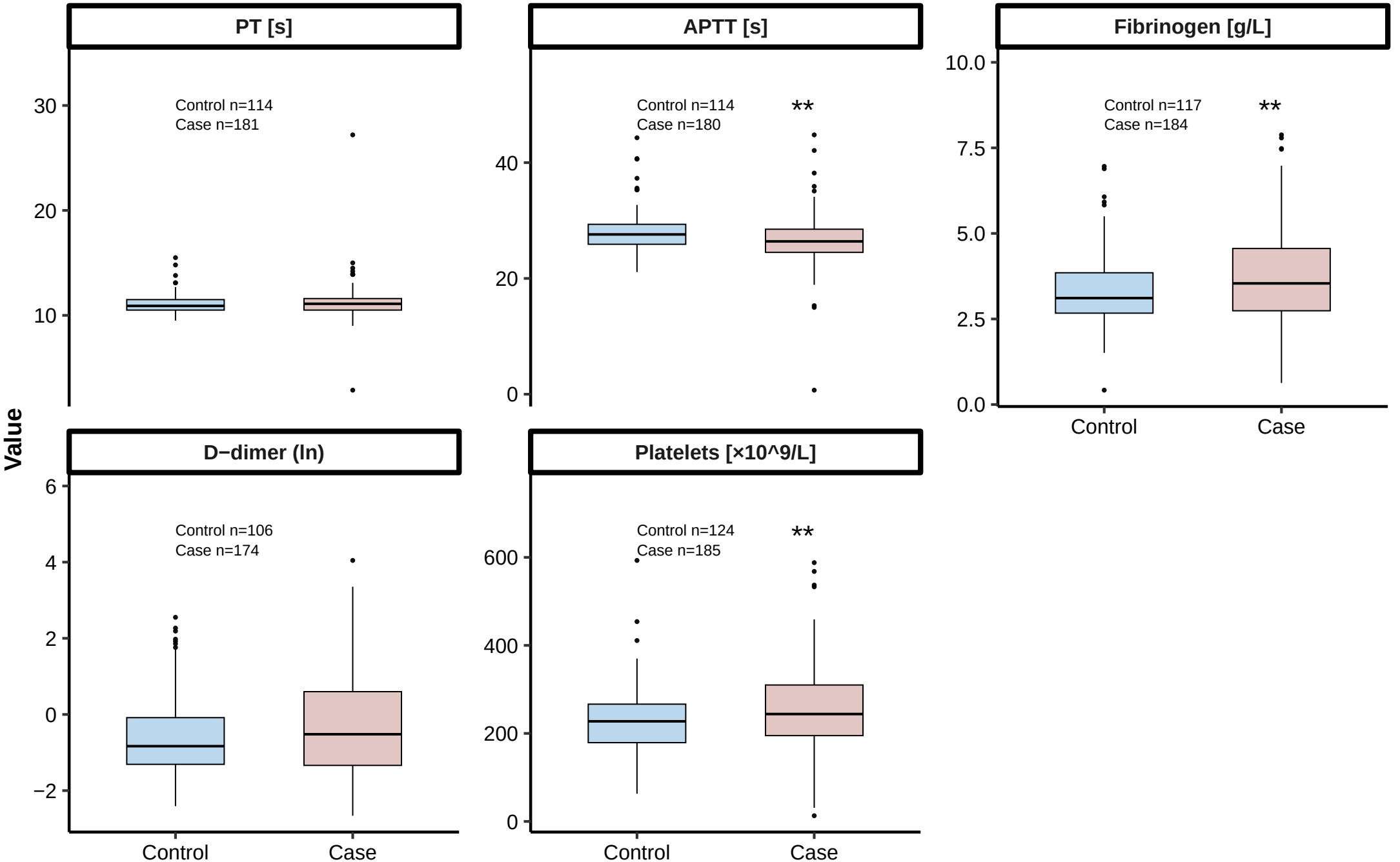

Figure S5. Comparison of SII and NLR between case and control group

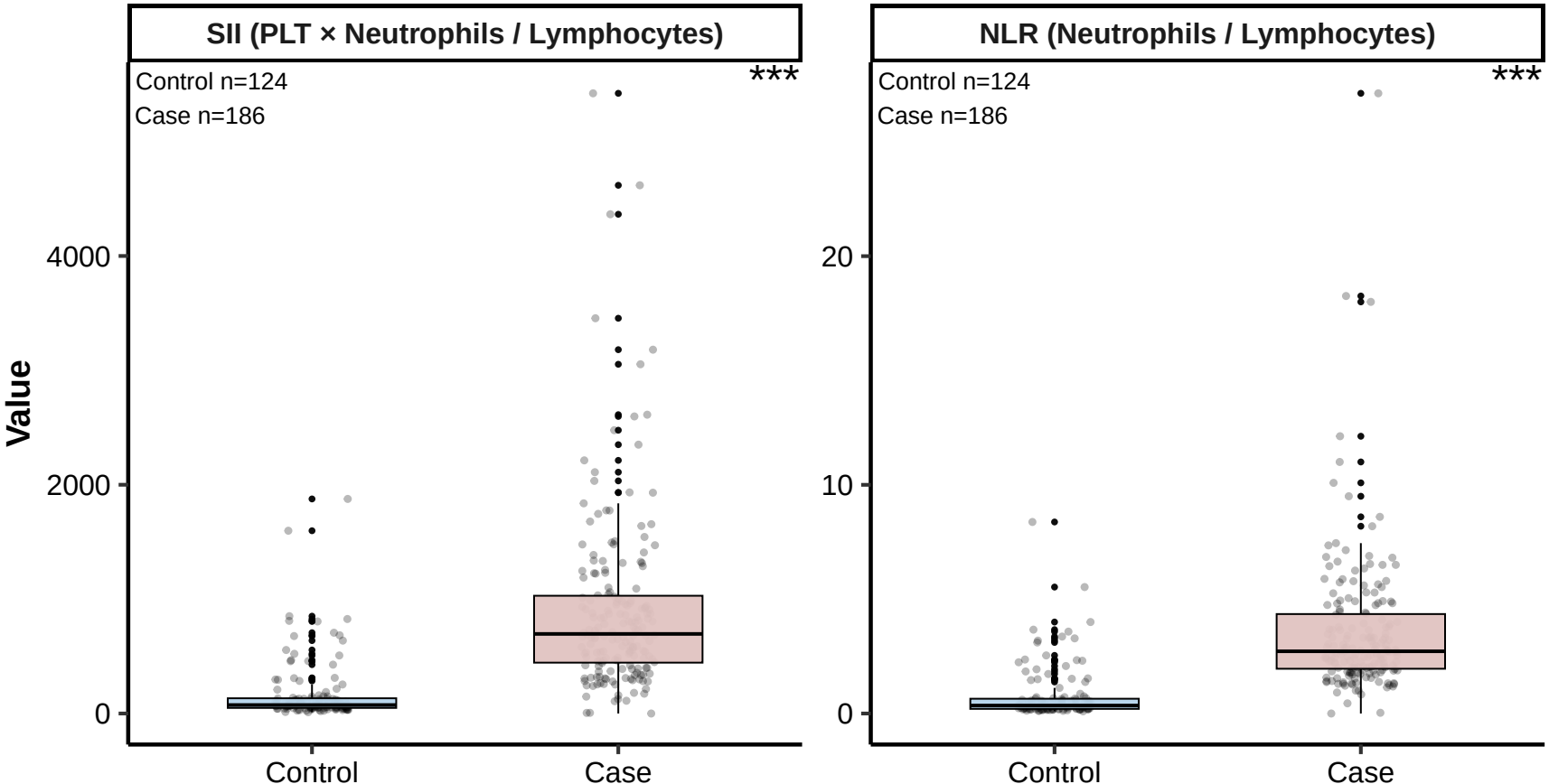

Figure S6. Correlation between SII and other indicators between case and control group

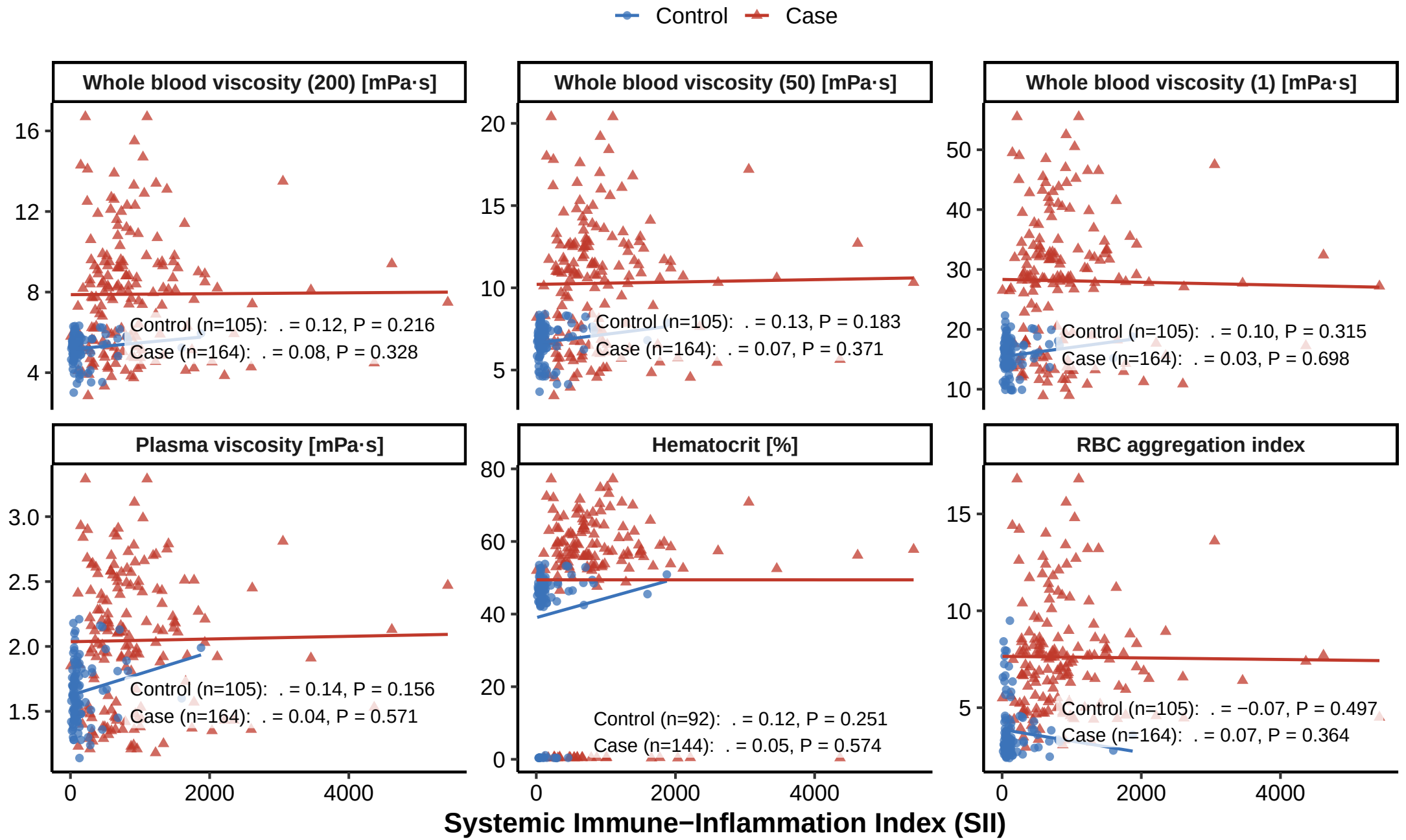

Figure S7. Mediation pathway of psoriasis inflammation on AS via vascular inflammation and rheology/coagulation dysfunction

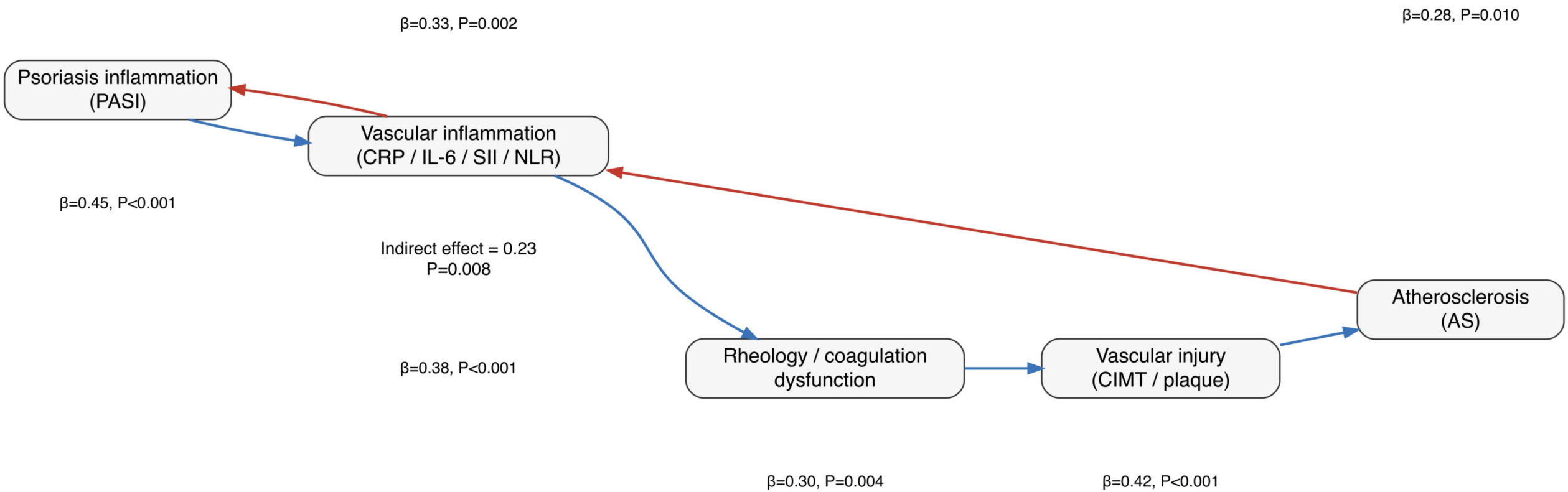

Figure S8. Fibrinogen levels by disease duration subgroups between case and control group