Supplemental Material
"Differences in the response to TNF inhibitors at distinct joint locations in patients with psoriatic arthritis: Results from nine European registries" by Ciurea A. et al.

Supplemental table S1. Number of patients included from the different EuroSpA registries.

	All patients starting TNFi (TNFi monotherapy and TNFi added to methotrexate) **N = 1729**	**Subgroup of patients starting TNFi as monotherapy** **N = 406**
Denmark (DANBIO), N (%)	604 (34.9)	18 (4.4)
Switzerland (SCQM), N (%)	361 (20.9)	184 (45.3)
Czech Republic (ATTRA), N (%)	357 (20.6)	89 (21.9)
Portugal (reuma.pt), N (%)	271 (15.7)	95 (23.4)
Iceland (ICEBIO), N (%)	50 (2.9)	1 (0.2)
Finland (ROB-FIN), N (%)	36 (2.1)	13 (3.2)
Romania (RRBR), N (%)	32 (1.9)	6 (1.5)
Italy (GISEA), N (%)	17 (1.0)	0 (0.0)
Turkey (TURKBIO), N (%)	1 (0.1)	0 (0.0)

Supplemental table S2. Number and proportions of joints at distinct articular sites at start of TNFi, stratified by psoriatic arthritis subtype.

	Patient profile 1 Involvement of <5 joints out of 28	**Patient profile 2** Involvement of ≥5 joints out of 28
Number of joints	2361	6036
Shoulder	68 (2.9)	108 (1.8)
Elbow	115 (4.9)	157 (2.6)
Wrist	438 (18.6)	715 (11.8)
MCP1	148 (6.3)	429 (7.0)
MCP2	234 (9.9)	780 (12.9)
MCP3	224 (9.5)	756 (12.5)
MCP4	62 (2.6)	387 (6.4)
MCP5	42 (1.8)	285 (4.7)
IP1	102 (4.3)	229 (3.8)
PIP2	157 (6.6)	548 (9.1)
PIP3	222 (9.4)	656 (10.9)
PIP4	97 (4.1)	404 (6.7)
PIP5	63 (2.7)	271 (4.5)
Knee	389 (16.5)	320 (5.3)

IP = interphalangeal joint, MCP = metacarpophalangeal joint, PIP = proximal interphalangeal joint.

Supplemental table S3. Number and percentage of observed resolutions of synovitis in 1729 patients with PsA and at least one swollen joint at treatment start.

Site of joint	Number of swollen joints at TNFi start	Number of observed resolutions of synovitis (%)
Shoulder	176	120 (68.2)
Elbow	272	176 (64.7)
Wrist	1153	693 (60.1)
MCP1/PIP1	899	616 (68.5)
MCP2/PIP2	1719	1177 (68.5)
MCP3/PIP3	1858	1207 (65.0)
MCP4/PIP4	950	695 (73.2)
MCP5/PIP5	661	479 (72.5)
Knee	709	441 (62.2)

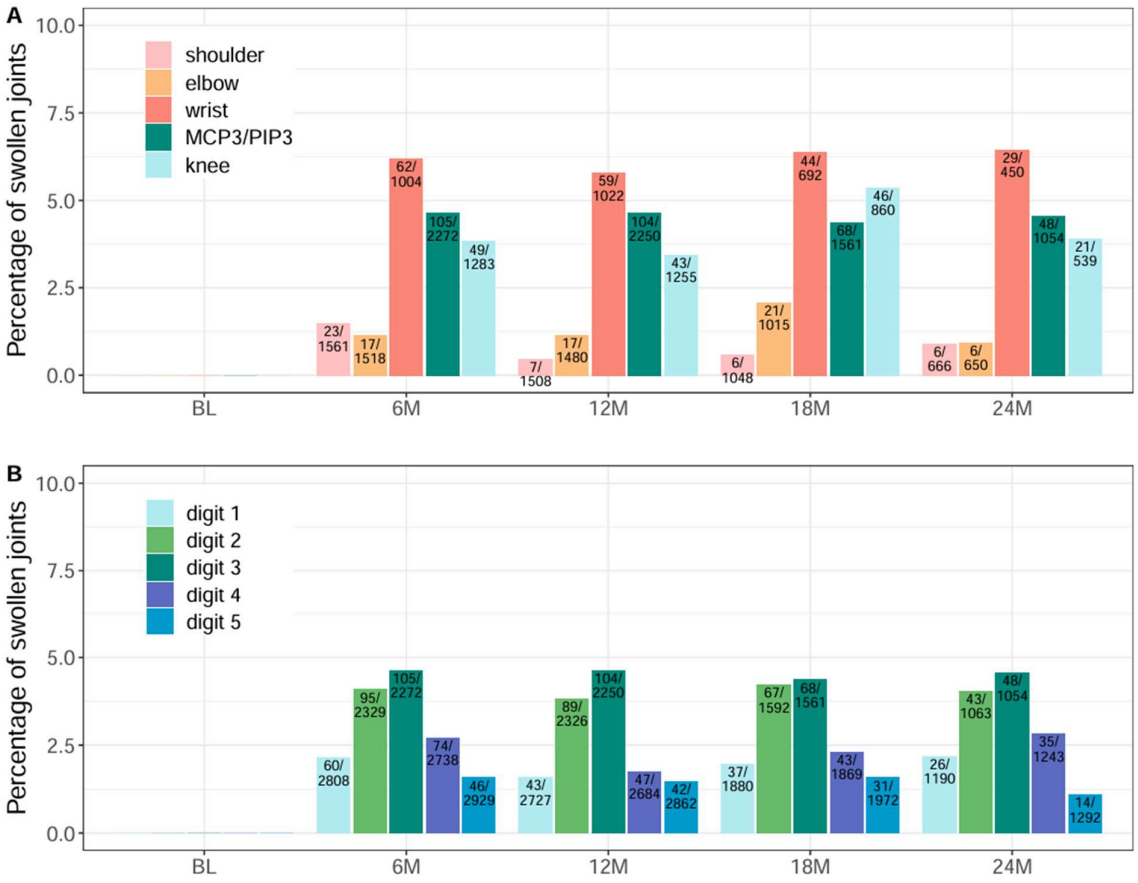
MCP = metacarpo-phalangeal joint; PIP = proximal interphalangeal joint

Supplemental table S4. Characteristics of patients with PsA included in the adjusted mixed-effect Cox proportional hazards models

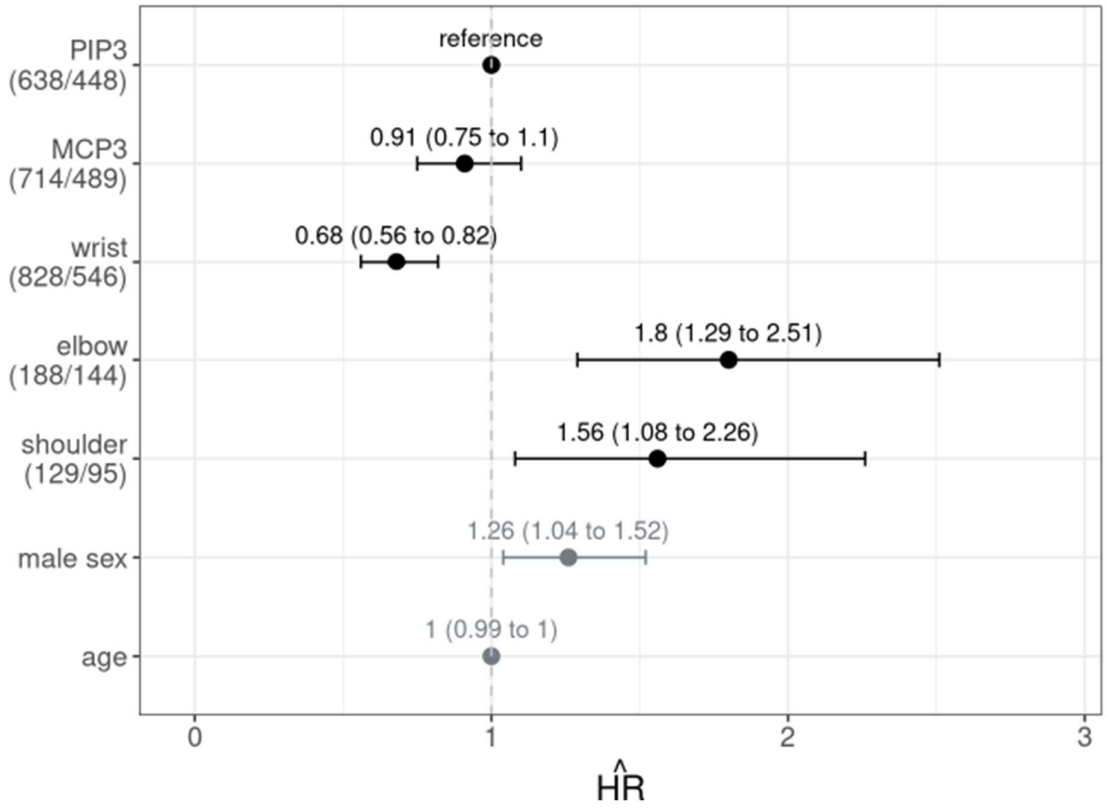
	All patients starting TNFi (TNFi monotherapy and TNFi added to methotrexate) N = 1173		Subgroup of patients starting TNFi as monotherapy N = 323	
	N		N	
Female sex, N (%)	1173	658 (56.1)	323	171 (52.9)
Age, years	1173	49.7 (11.8)	323	49.6 (11.6)
Symptom duration, years	994	9.2 (8.8)	286	10.0 (8.9)
Swollen joints 28	1148	5.3 (4.3)	310	5.0 (4.2)
Tender joints 28	1140	7.8 (6.1)	307	7.2 (5.9)
CRP, mg/l	1118	15.9 (23.1)	300	13.6 (17.0)
DAS28-CRP	992	4.8 (1.0)	251	4.6 (1.0)
Physician global score	1097	5.2 (2.2)	293	5.3 (2.1)
Patient global score	1052	6.6 (2.2)	273	6.5 (2.2)
Use of methotrexate, N (%)	1173	850 (72.5)	323	0 (0.0)

Except where indicated otherwise, values represent the mean and the standard deviation (SD). CRP = C-reactive protein; DAS28-CRP = Disease Activity Score using 28 joints and CRP; TNFi =Tumour Necrosis Factor inhibitors.

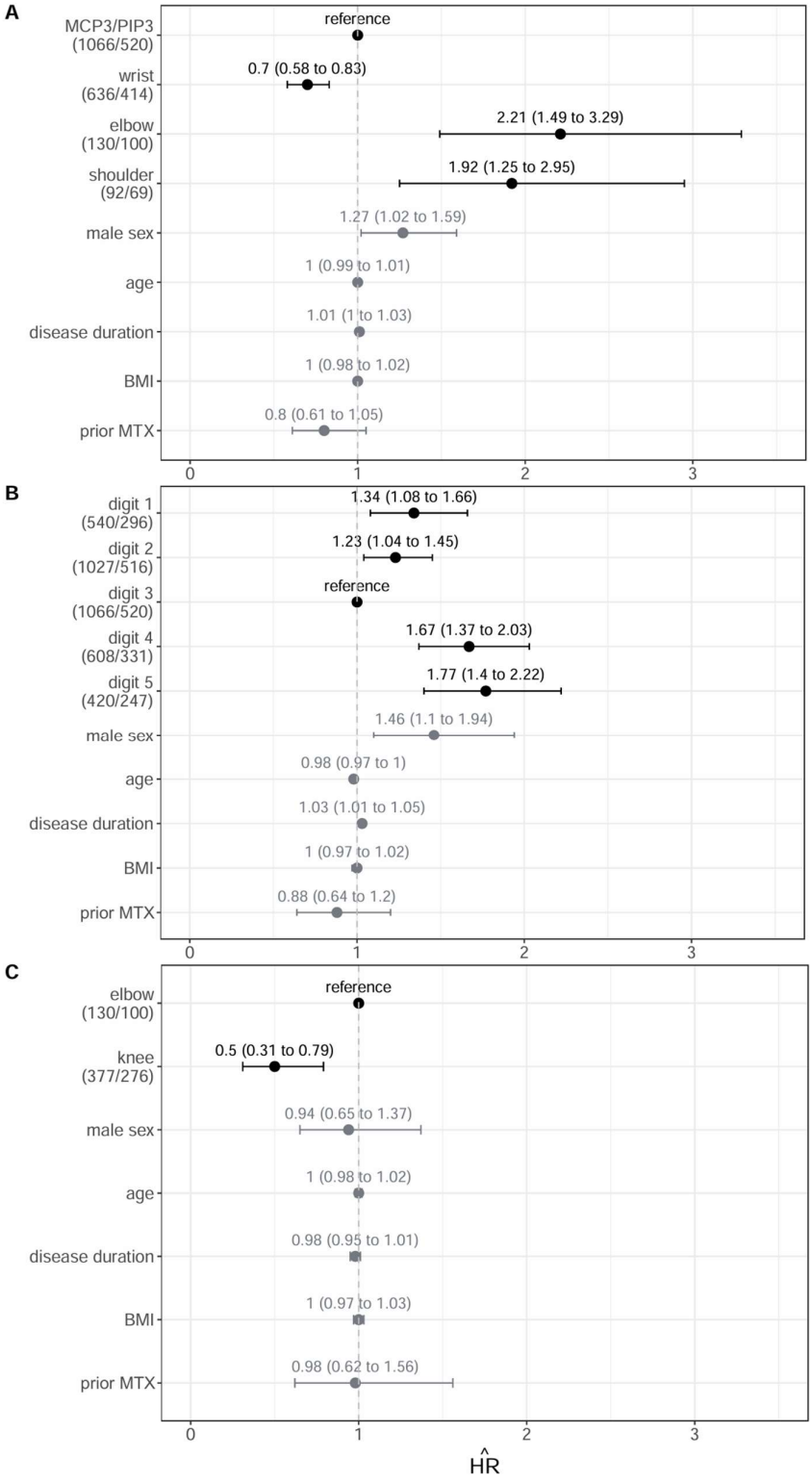
Supplemental Figure S1. For joints that exhibited no swelling at baseline (BL), the proportion of swollen joints is depicted for distinct sites at follow-up visits after start of treatment with the first tumour necrosis factor inhibitor. The proportions were calculated in relation to the total number of joints assessed at 6, 12, 18, and 24 months. **A.** Joints located along a proximal-distal axis of the upper extremity. **B.** Joints positioned along an anterior-posterior axis of the hand (digits 1-5) and the knee. Metacarpophalangeal and proximal interphalangeal joints of each digit were combined for analysis.



Supplemental Figure S2. Rate of resolution of swollen joints (HR and 95% CI) after start of tumour necrosis factor inhibitor treatment estimated using overall interval-censored mixed-effects Cox proportional hazards models adjusted for age and sex for joints along the proximal-distal axis of the upper limb ***with results for the proximal interphalangeal joint of digit 3 (PIP3) and the metacarpophalangeal joint of digit 3 (MCP3), respectively, shown separately***.



Supplemental Figure S3. Rate of resolution of **swollen joints** (HR and 95% CI) after start of TNFi treatment estimated using overall interval-censored mixed-effects Cox proportional hazards models adjusted for age, sex, methotrexate treatment prior to start of TNFi, disease duration and body mass index for different comparisons: (**A**) joints along the proximal-distal axis of the upper limb, (**B**) finger joints along the anterior-posterior axis of the hand (digits 1-5), (**C**) knee compared to elbow. The reference joint(s) are indicated in each panel. The number of swollen joints and the number of patients are shown for each joint location. BMI = body mass index; MCP3 = metacarpophalangeal joint of digit 3; MTX = methotrexate; PIP3 = proximal interphalangeal joint of digit 3; TNFi = tumour necrosis factor inhibition.



Supplemental table S5. Author contributions, as defined by CRediT (Contributor Roles Taxonomy; https://www.elsevier.com/authors/policies-and-guidelines/credit-author-statement)

Author	Conceptualisation	Methodology	Software	Validation	Formal analysis	Investigation	Resources	Data curation	Writing (Original draft)	Writing (Review and editing)	Visualisation	Supervision	Project administration	Funding acquisition
A. Ciurea	✓	✓		✓		✓	✓		✓	✓	✓	✓	✓	✓
S. Kissling	✓	✓		✓	✓	✓	✓	✓		✓	✓		✓	
A. Götschi	✓	✓		✓	✓	✓	✓	✓		✓	✓		✓	
LM Ønrbjerg		✓				✓	✓			✓			✓	
SH Rasmussen		✓	✓			✓	✓			✓				
B. Tamasi		✓	✓			✓	✓			✓				
B. Möller		✓				✓	✓			✓		✓		
MJ. Nissen		✓				✓	✓			✓		✓		
B. Glintborg		✓				✓	✓			✓		✓		✓
AG Loft		✓				✓	✓			✓		✓		✓
A. Scherer		✓		✓		✓	✓			✓				
R. Bräm						✓	✓			✓				
K. Pavelka						✓	✓			✓				✓
J. Zavada						✓	✓			✓		✓		✓
JM Dias						✓	✓			✓				✓
P. Valente						✓	✓			✓				
B. Gudbjornsson		✓				✓	✓			✓		✓		✓
O. Palsson						✓	✓			✓				
V. Rantalaiho		✓				✓	✓			✓				✓
R. Peltomaa						✓	✓			✓				✓
C. Codreanu						✓	✓			✓		✓		✓
C. Mogosan						✓	✓			✓				
F. Iannone		✓				✓	✓			✓		✓		✓
M. Sebastiani						✓	✓			✓				
GT Jones						✓	✓			✓		✓		✓
GJ Macfarlane						✓	✓			✓		✓		✓
I. Castrejon						✓	✓			✓				✓
Z. Rotar						✓	✓			✓		✓		✓
B. Michelsen						✓	✓			✓		✓		✓
JK Wallman		✓				✓	✓			✓		✓		✓
I van der Horst-Bruinsma						✓	✓			✓		✓		✓
O. Distler						✓	✓			✓				
M. Østergaard		✓				✓	✓			✓		✓		✓
ML Hetland		✓				✓	✓			✓		✓		✓
R. Micheroli	✓					✓	✓			✓				
C. Ospelt	✓					✓	✓			✓		✓		

Supplemental table S6. Description of ethical approvals in the participating countries.

Country	Ethical approval	Reference
Switzerland	The study was approved by the Ethics Committee of the Canton of Zurich. Written informed consent was obtained from all patients.	BASEC 2022-00272
Czech Republic	Ethical approval for ATTRA was granted by the Czech Multicentre Research Ethics Committee. No additional ethical approval was required for the current analysis. All subjects provided their written consent for the collection and storage of data before participation.	No. 201611 S300.
Portugal	Ethical approval has been granted for the registry and all patients provide informed consent and authorize the use of their personal data for investigation, which must be approved by an ethics committee (no local approval required).	Not applicable
Denmark	Not required for registry research.	Not applicable
Romania	No ethical approval required.	Not applicable
Iceland	Ethical approval was granted by The National Bioethics Committee and the Icelandic Data Protection Authority. No Informed Consent is required for registry research	Approval nr: 18-009 Ref nr. VSNb 2018010004/03.01
Finland	Ethical approval granted by the coordinating ethical committee of Helsinki and Uusimaa Hospital District	73/13/03/00/14
Italy	Ethical approval was granted by the IRB of University Hospital of Bari (the promoting centre) acting as a reference committee. All patients signed informed consent before register inclusion.	Approval number: 598-CE 02/05/2011
Turkey	The study was approved by both Dokuz Eylul University ethical committee and Turkish Medicines and Medical Devices Agency of the Turkish Ministry of Health. Informed consent was obtained from all participants.	Approval numbers: 2018/21-02 and 66175679-514.05.01-E.92906.