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OP0027

ASSOCIATION BETWEEN BASELINE CARDIOVASCULAR RISK AND INCIDENCE RATES OF MAJOR ADVERSE CARDIOVASCULAR EVENTS AND MALIGNANCIES IN PATIENTS WITH PSORIATIC ARTHRITIS AND PSORIASIS RECEIVING TOFACITINIB

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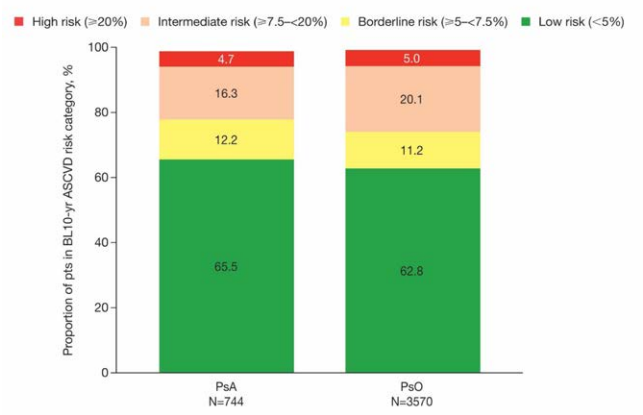
Background: Common comorbidities of psoriatic arthritis (PsA) and psoriasis (PsO) are cardiovascular (CV) disease and metabolic syndrome (MetS).[1,2] Risk of CV disease may be associated with increased risk of future malignancies.[3] Tofacitinib is a JAK inhibitor for treatment of PsA and has been investigated for treatment of PsO.
Objectives: To examine baseline (BL) CV risk and its association with incidence rates (IRs) of major adverse CV events (MACE) and malignancies in tofacitinib-treated patients (pts) with PsA and PsO.
Methods: Analysis included data from 3 (Phase [P]3/long-term extension [LTE]) trials of pts with PsA and 7 (P2/3/LTE) trials of pts with PsO receiving ≥1 dose of tofacitinib (5 or 10 mg twice daily). IRs (pts with events/100 pt-yrs) for MACE and malignancies (excluding non-melanoma skin cancer) were stratified by: history of coronary artery disease (HxCAD [≥1 of myocardial infarction, coronary heart disease, coronary artery procedure or stable angina pectoris]); BL 10-yr atherosclerotic CV disease (ASCVD) risk (ASCVD-pooled cohort equations calculator [only in pts without HxCAD]); and BL MetS (≥3 of hypertension, raised triglycerides, reduced high-density lipoprotein cholesterol, high waist circumference or high fasting glucose levels).
Results: Of 783 and 3663 pts with PsA and PsO, total tofacitinib exposure was 2038 and 8950 pt-yrs, and median duration of exposure was 3.0 and 2.4 yrs, respectively. In pts with PsA and PsO, 5.0% and 2.5% had HxCAD, respectively; in those without HxCAD, >20% had intermediate/high BL 10-yr ASCVD risk (Figure 1). At BL, 40.9% and 32.7% of pts with PsA and PsO had MetS, respectively. IRs of MACE were greatest in pts with PsA and PsO who had HxCAD/high BL 10-yr ASCVD risk (Table 1). In the PsA cohort, 5/6 pts with MACE had BL MetS. IRs of malignancies in pts with PsA were greatest in those with intermediate/high BL 10-yr ASCVD risk; 8/9 pts with malignancies in these risk categories had BL MetS (Table 1). In the PsO cohort, IR of malignancies was notably greater in those with high vs low/intermediate BL 10-yr ASCVD risk (Table 1).

Fig. BL 10-yr ASCVD risk in pts without HxCAD with PsA and PsO receiving tofacitinib



Data unavailable for 1.3% of pts with PsA and 1.0% of pts with PsO
PsA trials: NCT01877668; NCT01882439; NCT01976364. PsO trials: NCT01276639; NCT01309737; NCT01241591; NCT01186744; NCT00678210; NCT01710046; NCT01163253
N, total pts

Conclusion: In tofacitinib-treated pts with PsA and PsO, raised CV risk and MetS at BL were potentially associated with higher IRs of MACE and malignancies. Our findings support assessing CV risk in pts with PsA and PsO and enhanced monitoring for malignancies in those with raised CV risk.

REFERENCES:

[1] Karmacharya et al. Ther Adv Musculoskel Dis 2021; 13: 1-15.
[2] Garshick et al. J Am Coll Cardiol 2021; 77: 1670-1680.
[3] Lau et al. JACC CardioOncol 2021; 3: 48-58.

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Table 1. IRs of MACE and malignancies in pts with PsA and PsO receiving tofacitinib, stratified by HxCAD, BL 10-yr ASCVD risk and BL MetS

	MACE				Malignancies			
	PsA		PsO		PsA		PsO	
	n/N[n1]	IR (95% CI)	n/N[n1]	IR (95% CI)	n/N[n1]	IR (95% CI)	n/N[n1]	IR (95% CI)
HxCAD								
Yes	1/39[0]	0.97 (0.02, 5.38)	3/93[0]	1.49 (0.31, 4.36)	0/39[0]	0.00 (0.00, 3.52)	0/93[0]	0.00 (0.00, 1.83)
No	5/744[5]	0.25 (0.08, 0.59)	20/3570[10]	0.22 (0.13, 0.34)	15/744[10]	0.75 (0.42, 1.24)	60/3570[26]	0.66 (0.51, 0.85)
BL 10-yr ASCVD risk category								
High risk (≥20%)	1/35[1]	1.26 (0.03, 7.01)	7/179[4]	1.67 (0.67, 3.43)	1/35[1]	1.26 (0.03, 7.03)	15/179[10]	3.57 (2.00, 5.89)
Intermediate risk(≥7.5–<20%)	2/121[2]	0.62 (0.07, 2.23)	9/716[6]	0.50 (0.23, 0.95)	8/121[7]	2.46 (1.06, 4.86)	23/716[9]	1.28 (0.81, 1.92)
Borderline risk(≥5–<7.5%)	1/91[1]	0.42 (0.01, 2.32)	2/400[0]	0.19 (0.02, 0.67)	2/91[1]	0.83 (0.10, 3.01)	5/400[1]	0.47 (0.15, 1.09)
Low risk (<5%)	1/487[1]	0.08 (0.00, 0.42)	2/2241[0]	0.03 (0.00, 0.13)	4/487[1]	0.30 (0.08, 0.77)	17/2241[6]	0.30 (0.17, 0.47)
BL MetS								
Yes	5/320	0.60 (0.20, 1.40)	10/1197	0.34 (0.16, 0.63)	10/320	1.20 (0.58, 2.21)	26/1197	0.89 (0.58, 1.31)
No	1/463	0.08 (0.00, 0.44)	13/2466	0.20 (0.11, 0.35)	5/463	0.40 (0.13, 0.92)	34/2466	0.54 (0.37, 0.75)

Follow-up time calculated up to the day of the first event and subject to risk period of 28 days beyond the last dose of study drug.
CI, confidence interval; N, total pts; n, pts with MACE/malignancies; n1, pts with MACE/malignancies and BL MetS.