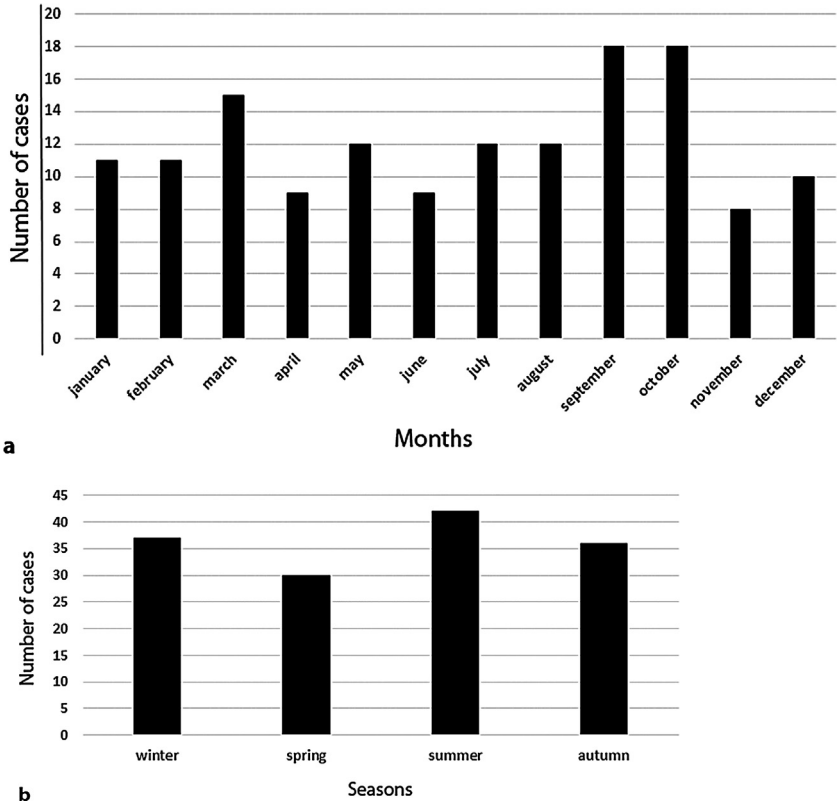

Fig. 1. Distribution of infectious spondylodiscitis according to month (a) or season of diagnosis (b).

Although our population was of small size, we have analyzed records covering 15 years, and found no seasonal trend in primary infectious spondylodiscitis cases.

Disclosure of interest

The authors declare that they have no competing interest.

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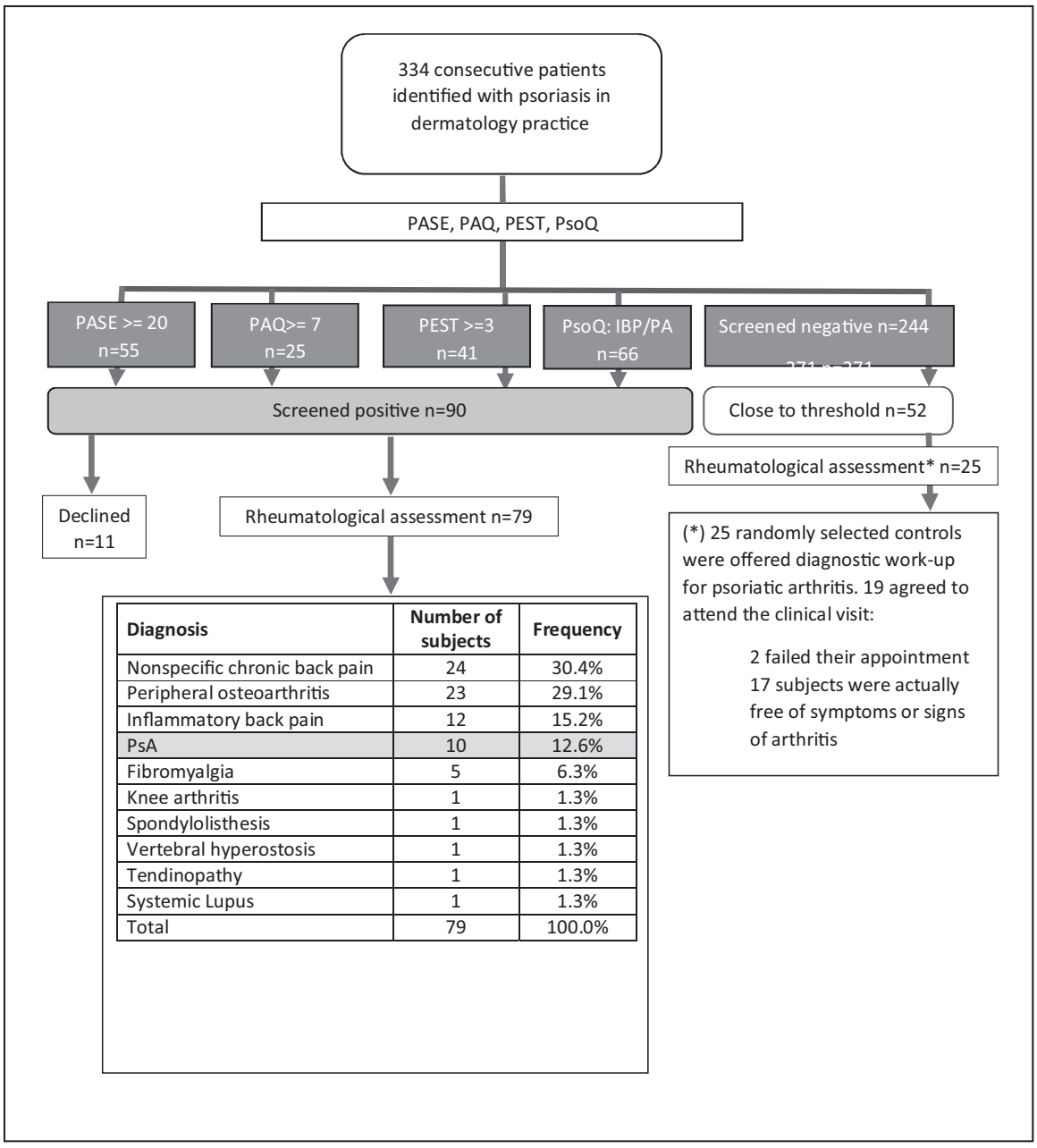
Screening for psoriatic arthritis: targeting phenotypes may improve case detection

Several questionnaires have been developed to screen for psoriatic arthritis (PsA) among subjects with psoriasis. PsA may present with either a spondyloarthritis-like phenotype [1] or a rheumatoid arthritis-like phenotype [2]. The Psoriasis and Arthritis Questionnaire (PAQ) [3], includes 2 questions related to back pain out of 10 in total. The Psoriatic Arthritis Screening and Evaluation (PASE) [4] tool has one question dedicated to back pain. The Psoriasis Epidemiology Screening Tool (PEST) [5] has no question specific to back pain. All have been validated as effective screening tools for PsA among subjects with psoriasis. Differences among these tools in the relative weights of questions targeting each phenotype may impact screening outcomes. Head-to-head comparative data remains limited [6–9].



Diagnosis	Number of subjects	Frequency
Nonspecific chronic back pain	24	30.4%
Peripheral osteoarthritis	23	29.1%
Inflammatory back pain	12	15.2%
PsA	10	12.6%
Fibromyalgia	5	6.3%
Knee arthritis	1	1.3%
Spondylolisthesis	1	1.3%
Vertebral hyperostosis	1	1.3%
Tendinopathy	1	1.3%
Systemic Lupus	1	1.3%
Total	79	100.0%

Fig. 1. Study Flow Chart.

A new questionnaire, named PsoQ, targeting both inflammatory back pain (IBP) and peripheral arthritis (PA), with equal weight, that is, one set of questions for IBP and one set for PA using currently available clinical criteria for both, was tested for PsA screening among subjects with psoriasis in an academic hospital dermatology practice, in comparison with PAQ, PASE and PEST. The study was approved by the IRB of our academic institution (CEHDF 444).

Three hundred thirty-four subjects with psoriasis (54.9% females, mean (SD) age 39 (17) years and mean (SD) psoriasis duration 13 (13) years), were submitted the PsoQ in addition to the PASE, PAQ and PEST (5) questionnaires. Subjects scoring above threshold values, labeled screened positive, were further assessed for psoriatic arthritis. Threshold values were set according to the literature at 20, 7 and 3 for PASE, PAQ and PEST respectively. PsoQ threshold values were set a priori at 4/6 for IBP and 3/4 for PA Fig. 1.

Ninety patients (27.0%) were screened positive using any of the four questionnaires, 25 (7.5%) with PAQ, 55 (16.5%) with PASE, 41 (12.3%) with PEST and 66 (19.8%) with PsoQ. Twelve (3.6%) subjects were screened positive by all the four questionnaires, 20 (6.0%) by three questionnaires, 21 (6.3%) by two questionnaires, and 39 (11.7%) by a single questionnaire.

Seventy-nine screened positive subjects agreed to undergo rheumatological work-up. Ten were classified as PsA according to the CASPAR criteria [10], 5 with the spondyloarthritis phenotype and 5 with the peripheral arthritis phenotype.

Sensitivities and specificities of the 4 questionnaires ranged between 50% to 100% and 82.7% to 93.8% respectively Table 1. Sensitivity was the highest with PsoQ (100%) while specificity was the highest with PAQ7 (93.8%). Positive predictive values were low, between 12.7% and 20.0% while negative predictive values were high, between 98.4% and 100.0%. The highest positive predictive value was achieved with PAQ7 (20%) and the highest negative predictive value (100%) obtained with PsoQ. Positive likelihood ratios were moderate ranging from 4.7 to 8.1 and negative likelihood

Table 1
Screening properties of the four questionnaires: PASE, PAQ, PEST and PsoQ (IBP/IA) using threshold values of 20, 7, 3 and (4/3) respectively.

	PASE20	PAQ7	PEST3	PsoQ
Sensitivity	70.0 (34.7–93.3)	50.0 (18.7–81.3)	80.0 (44.4–97.5)	100 (69.2–100)
Specificity	86.7 (82.7–90.0)	94.4 (91.5–96.6)	90.9 (87.4–93.6)	83.9 (79.7–87.6)
Positive predictive value	12.7 (5.3–24.5)	20 (6.8–40.7)	19.5 (8.8–34.9)	14.7 (7.3–25.4)
Negative predictive value	99.0 (97.3–99.8)	98.6 (96.6–99.5)	99.4 (97.8–99.9)	100 (98.8–100)
Positive likelihood ratio	5.3 (2.0–9.3)	8.9 (2.2–23.9)	8.8 (3.5–15.2)	6.2 (3.4–8.1)
Negative likelihood ratio	2.9 (1.3–13.4)	1.8 (1.1–5.2)	4.5 (1.6–37.4)	NAs

ratios were low, ranging between 0.2 and 0.5. Agreement between pairs of instruments ranged between 0.34 and 0.58.

These findings suggest that currently available screening tools may not capture the same PsA patients, possibly as a result of the different weighs given to axial and peripheral involvement and targeting both PsA phenotypes may improve screening performance.

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Modified rheumatoid arthritis impact of disease (RAID) score, a potential tool for depression and anxiety screening for rheumatoid arthritis

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Rheumatoid arthritis (RA) is a chronic-inflammatory disease that involved symmetric polyarthritis. Patients with RA possessed higher risk of depression and anxiety [1–4]. When comorbid with psychiatric illness, patients tend to have worse health outcomes [1–3,5–7]. It is important to identify these patients so timely intervention can be provided. A self-reported questionnaire, Rheumatoid Arthritis Impact of Disease (RAID), was developed by the European League Against Rheumatism (EULAR) to reflect the disease activity and the impact of RA from patients' perspective [8–10]. The aims of this study were to evaluate the association of RAID with depression and anxiety, and to develop a modified RAID to identify high risk patients.

We conducted a cross-sectional study from August of 2017 to April of 2018 at the rheumatology department in a regional hospital in Taiwan. Patients, aged ≥ 20 years, with a diagnosis of RA based on the 2010 American College of Rheumatology (ACR)/EULAR criteria were included. RA disease activity was recorded with the Disease Activity Score over 28 joints based on erythrocyte sedimentation rate (DAS28–ESR) and RAID Score. Depressive symptoms were recorded according to Hospital Anxiety and Depression Scale (HADS). Univariate and multiple linear regression analyses were used to determine the associations between RAID and depression or anxiety in patients with RA. New models of RAID for depression (RAID-D) and anxiety (RAID-A) were developed based on the beta coefficients from the multiple logistic regression models, and were validated using bootstrap methods with 1000 replications. Among 625 RA patients, 96 (15.4%) and 65 (10.4%) were classified as having depression and anxiety, respectively. The mean of DAS28-ESR