Patient-Reported Indicators of Health and Symptoms in US Patients with Primary Biliary Cholangitis (PBC)

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INTRODUCTION

- Primary Biliary Cholangitis (PBC) is a cholestatic liver disease with debilitating but under-recognized symptoms.
- The aim of the optional patient reported outcome (PRO) portion of TARGET-PBC is to evaluate patient reported disease symptoms in a large and diverse PBC population.

METHODS

- TARGET-PBC is a longitudinal observational study of PBC patients at 35 U.S. sites (26 academic/9 community).
- Patients are asked to electronically complete symptom and health status assessments via the 5-D Itch, PBC-40, and PROMIS Fatigue questionnaires at baseline, and every 6-months thereafter.
- Baseline assessments are completed at study entry and are not baseline disease assessments.
- The 5-D Itch questionnaire asks patients to report pruritus duration, degree, direction, disability and distribution over the last 2 weeks.
- The PBC-40 questionnaire is a disease-specific quality of life questionnaire evaluating patient reported symptoms over the last 4 weeks.
- The PROMIS fatigue questionnaire evaluates patient reported fatigue symptoms within the last 7 days.
- Respondents are defined as participants who completed at least 1 questionnaire and not participants who have responded to treatment.

PARTICIPANT CHARACTERISTICS

- Total enrollment for TARGET-PBC: 510
- Participants with evaluable data: 485
- Consented to complete PRO: 293
- Completed at least 1 PRO: 94

Table 1. Characteristics of participants who completed questionnaires (respondents) vs. those who didn't (non-respondents)

	PRO Respondents (n=94)	PRO Non-Respondents (n=199)	P-Value
Mean Age at Study Entry	58.8 years	60.4 years	0.1616
Mean Duration of Disease	7.6 years	7.8 years	0.9632
Female	86 (91.5%)	182 (91.5%)	0.9927
White African American American Indian or Alaska Native Asian	87 (98.9%) 0 (0%) 0 (0%) 1 (1.1%)	169 (88%) 13 (6.8%) 5 (2.6%) 5 (2.6%)	0.0223
Hispanic or Latino Not Hispanic or Latino	9 (10.3%) 78 (89.7%)	30 (15.6%) 161 (83.9%)	0.3915
AMA Positive	76/84 (90.5%)	152/180 (84.4%)	0.1843
Currently On UDCA Treatment	92 (97.9%)	189 (95.0%)	0.2436
Currently on OCA Treatment	14 (14.9%)	27 (13.6%)	0.7605
PBC-AIH Overlap Syndrome	11 (11.7%)	31 (15.6%)	0.3777
Cirrhosis	33 (35.1%)	76 (38.2%)	0.6107
Decompensated Cirrhosis	12/33 (36.4%)	40/76 (52.6%)	0.1199
Mean ALP	177.7 IU/L	213.5 IU/L	0.3065
APRI Score > 0.54	33/92 (35.9%)	84/189 (44.4%)	0.1720
GLOBE Score > 0.3	16/83 (19.3%)	50/179 (27.9%)	0.1340
Medical Record Reporting Pruritus	55 (58.5%)	94 (47.2%)	0.0720
Medical Record Reporting Fatigue	54 (57.4%)	99 (49.7%)	0.2190

PRURITUS & FATIGUE

Figure 1. Pruritus PRO Scores & Clinician Documented Symptoms

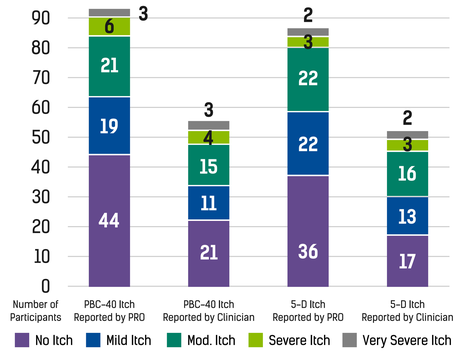


Table 2 – PRO Concordance Rates

	No Itch	Mild Touch	Mod. Itch	Severe Itch	Very Severe
5-D Itch Score					
n(%) documented by clinician	17 (20%)	13 (15%)	16 (19%)	3 (4%)	2 (2%)
n(%) reported by PRO	36 (42%)	22(26%)	22 (26%)	3 (4%)	2 (2%)
% concordance	47%	59%	73%	100%	100%
PBC-40 Itch Score					
n(%) documented by clinician	21 (23%)	11 (12%)	15 (16%)	4 (4%)	3 (3%)
n(%) reported by PRO	44 (47%)	19 (20%)	21 (23%)	6 (6%)	3 (3%)
% concordance	48%	58%	71%	67%	100%
PBC-40 Fatigue Score					
n(%) documented by clinician	1 (1%)	10 (11)%	18 (19%)	18 (19%)	7 (7%)
n(%) reported by PRO	5 (5%)	27 (29%)	30 (32%)	24 (26%)	8 (9%)
% concordance	20%	37%	60%	75%	88%
PROMIS Fatigue Score					
n(%) documented by clinician	2 (2%)	8 (9%)	20 (22%)	12 (13%)	8 (9%)
n(%) reported by PRO	12 (13%)	21 (23%)	31 (34%)	16 (18%)	10 (11%)
% concordance	17%	38%	65%	75%	80%

Figure 2. Comparison of Cirrhosis & PRO Scores

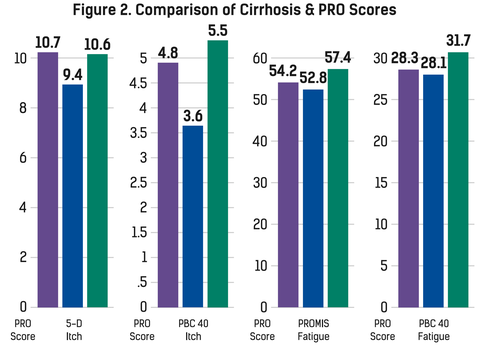
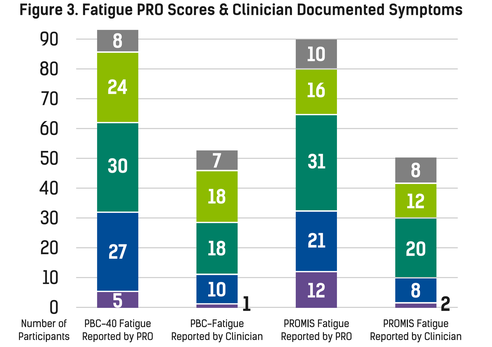
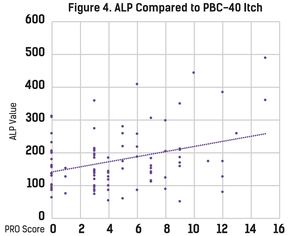


Figure 3. Fatigue PRO Scores & Clinician Documented Symptoms



ALKALINE PHOSPHATASE RELATIONSHIP TO PRO SCORES

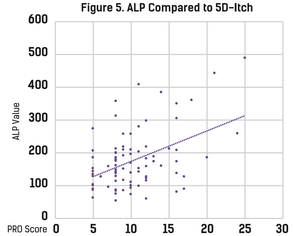
Figure 4. ALP Compared to PBC-40 Itch



	ALP[1] ≤ 1.67 ULN	ALP[1] > 1.67 ULN
Mean (SD)	4.1 (3.43)	6.7 (4.9)
Range	0 – 12	0 – 15

P-value = 0.0272

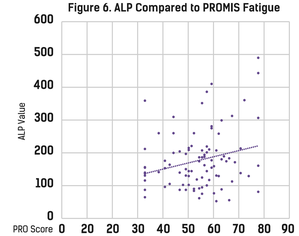
Figure 5. ALP Compared to 5D-Itch



	ALP[1] ≤ 1.67 ULN	ALP[1] > 1.67 ULN
Mean (SD)	9.4 (3.47)	14.3 (5.52)
Range	5 – 20	8 – 25

P-value = 0.0008

Figure 6. ALP Compared to PROMIS Fatigue



	ALP[1] ≤ 1.67 ULN	ALP[1] > 1.67 ULN
Mean (SD)	53.4 (11.31)	58.1 (13.36)
Range	33 – 78	33 – 78

P-value = 0.1743

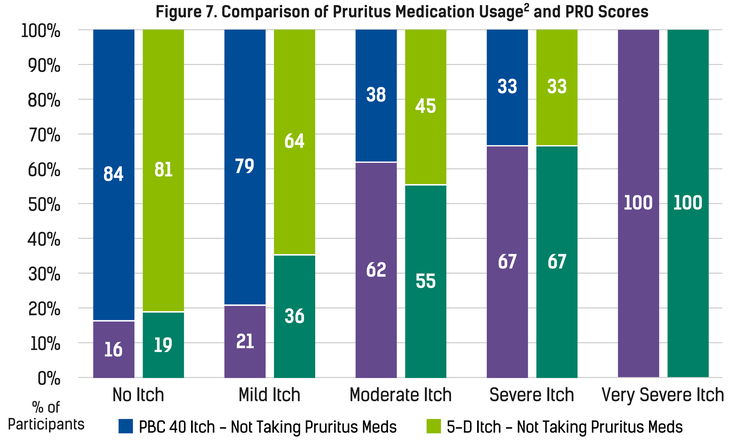
[1]ALP ULN is site specific, if not provided 126 IU/L is assumed

STATEMENT & DISCLOSURES

TARGET-PBC is a collaboration among academic & community investigators, the pharmaceutical industry, and PBC patient community advocates. TARGET-PBC is sponsored by TARGET PharmaSolutions, Inc. TARGET thanks the study staff, nurses, health care providers and patients at each study center for their contributions to this work.
Listings of Principal Investigators and Industry Partners are available upon request by emailing info@targetpharmasolutions.com.
Elizabeth Carey, MD – Consultant: TARGET PharmaSolutions
W. Ray Kim, MD – Consultant: TARGET PharmaSolutions and Intercept; Advisory Board: Intercept

MEDICATIONS

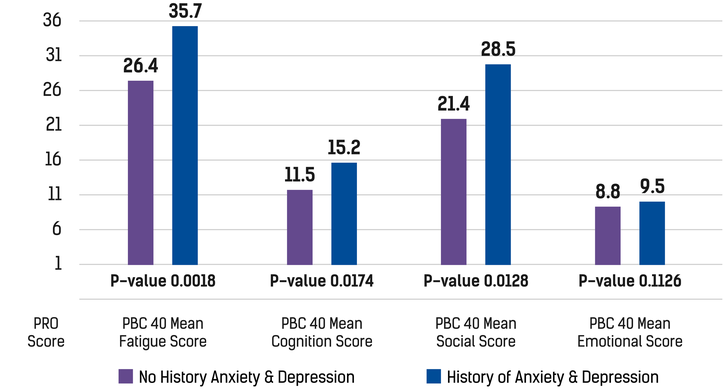
Figure 7. Comparison of Pruritus Medication Usage[2] and PRO Scores



[2]Pruritus Medications include: Colestipol, Cholestyramine, Fenofibrate, Hydroxyzine, Naltrexone, Rifampicin, Sertraline

SOCIAL IMPAIRMENT

Figure 8. Comparison of PBC-40 PRO Scores & History of Anxiety/Depression



CONCLUSIONS

- In this real-world cohort, PBC patients commonly reported pruritus and fatigue.
- Clinician assessment of symptom severity consistently underestimated patient-reported severity for both pruritus and fatigue, although concordance of patient-clinician reporting increased as symptom severity increased.
- Suboptimal response to UDCA defined by ALP, initially recognized as a predictor of survival, also affects PROs, lending further clinical significance to the criterion.
- History of depression or anxiety was associated with higher social impairment PRO scores.
- The concordance rate between PRO reported itch symptoms and medication usage is lower for mild/moderate symptoms compared to severe/very severe complaints.
- There was no correlation between advanced liver disease and patient-reported severity of pruritus and fatigue.