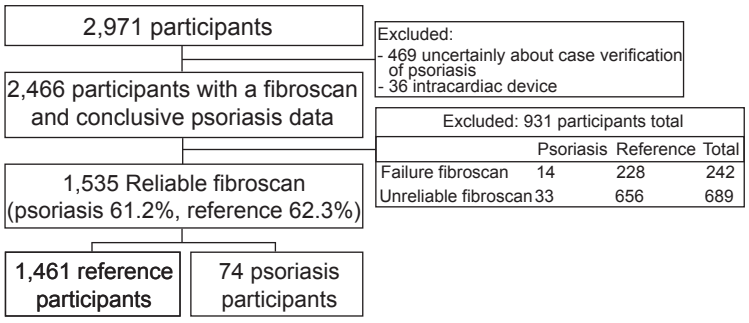

Fig. S1. Participants from the Rotterdam Study included in this study.

Appentix S1

SUPPLEMENTARY METHODS

Co-variables

Participants were interviewed at home using a standardized questionnaire to obtain data on demographics, medical history, comorbid conditions, smoking behaviour, alcohol intake and (prior) drug use. Data from the first interview prior to TE were used. Excessive alcohol consumption was defined as more than 14 drinks weekly for men and women. Pack-years of smoking were calculated as years of smoking (excluding years of non-smoking) multiplied by the mean number of packs (containing 20 cigarettes) smoked per day.

Anthropometric measurements were performed by well-trained nurses. Body mass index (BMI) was calculated as weight (kg)/height (m^2). Waist and hip circumference were measured in centimetres. The mean of 2 blood pressure measurements, obtained at a single visit in a sitting position after a minimum of 5 min rest, was used for analysis.

Fasting blood samples were collected on the morning of ultrasound examination. Blood lipids, glucose and alanine aminotransferase (ALT), aspartate aminotransferase (AST), gamma-glutamyl transferase (GGT), and platelets were analysed using automatic enzymatic procedures. Insulin, HBsAg and anti-HCV antibodies were measured by automatic immunoassay (Roche Diagnostics GmbH, Mannheim, Germany).

Metabolic syndrome was defined, according to Adult Treatment Panel III criteria, as the presence of at least 3 of the following 5 traits: (*i*) abdominal obesity, defined as a waist circumference in men > 102 cm and in women > 88 cm; (*ii*) serum triglycerides ≥ 1.7 mmol/l or drug treatment for elevated triglycerides; (*iii*) serum high-density lipoprotein (HDL) cholesterol < 1.0 mmol/l in men and < 1.3 mmol/l in women or drug treatment for low HDL-C; (*iv*) blood pressure ≥ 130/85 mmHg or drug treatment for elevated blood pressure; (*v*) fasting plasma glucose ≥ 5.6 mmol/l or drug treatment for elevated blood glucose (10). Insulin resistance index was calculated using the Homeostasis Model Assessment of Insulin Resistance (HOMA-IR): fasting glucose (mmol/l) × fasting insulin (mU/l)/22.5 (11).

Statistical analysis

The statistical significance of differences in distribution of categorical data and continuous data between participants with and without psoriasis was determined using χ^2 tests, Student's *t*-tests or Wilcoxon rank-sum tests.

The association between liver fibrosis and psoriasis was investigated using logistic regression, where LSM > 9.5 kPa by TE suggested the presence of advanced liver fibrosis. Two multivariable models were used: a model adjusted for age and sex and a model in which we *a priori* decided to adjust for age, sex, alcohol consumption, presence of the metabolic syndrome, steatosis and ALT (all of which are risk factors for liver fibrosis). Metabolic syndrome was included as a single co-variable, instead of the 5 cardiovascular risk factors mentioned previously, to avoid over-adjustment. As a sensitivity analysis a linear regression model was used to investigate the association between the presence of psoriasis and LSM (log-transformed) as a continuous variable. Furthermore, since an increased prevalence of NAFLD was reported previously in patients with psoriasis, all analyses were repeated separately for participants with NAFLD (1, 2).

p-values were 2-sided and values < 0.05 were considered statistically significant. Statistical analyses were performed using SPSS 20.0 (IBM, UK).

The study was approved by the medical ethics committee of the Erasmus Medical Center in Rotterdam. Written informed consent was obtained from all participants.

Table SI. *Characteristics of 6 patients with psoriasis with advanced fibrosis*

Participants[a]	Sex	Age (years)	Body mass index (kg/m^2)	Metabolic syndrome	Alcoholic drinks weekly	Methotrexate use	NAFLD	Liver stiffness (kPa)	Alanine aminotransferase	PASI
1	M	87	23.1	Yes	18	No	Not applicable	11.7	12	0.4
2	F	66	24.1	Yes	18	No	Not applicable	25.4	32	3.0
3	M	81	28.5	Yes	0	No	Yes	15.5	12	Capitis[b]
4	M	76	28.1	Yes	5	No	No	10.2	19	–
5	F	75	23.5	Yes	8	No	Yes	46.4	19	3.3
6	M	80	33.9	Yes	5	No	Yes	9.6	16	–

[a]None of these participants have viral hepatitis or have used hepatotoxic mediation.
[b]Only the scalp was involved by this patient.
NAFLDL non-alcoholic fatty liver disease; PASI: Psoriasis Area and Severity Index.

Table SII. *Univariate and multivariate adjusted model assessing the association between psoriasis and advanced liver fibrosis*[a]

	Normal liver vs. fibrosis	
	OR (95% CI)	*p*-value
Crude univariate model[b]		
Psoriasis	2.39 (0.99–5.76)	0.052
Age- and sex- adjusted		
Psoriasis	2.36 (0.95–5.85)	0.06
Multivariable adjusted[c]		
Age, years	1.13 (1.08–1.17)	<0.001
Sex, female	1.90 (1.03–3.49)	0.04
Metabolic syndrome	1.63 (0.89–3.02)	0.12
Alcoholic beverages weekly	0.99 (0.95–1.03)	0.75
Alanine aminotransferase (U/l)	1.03 (1.02–1.05)	<0.001
Steatosis	1.51 (0.81–2.80)	0.19
Psoriasis	2.57 (1.00–6.63)	0.051

[a]Advanced liver fibrosis defined as LSM > 9.5. [b]Nagelkerke R square = 0.007; [c]Nagelkerke R square = 0.164.
OR: odds ratio; CI: confidence interval.