STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No.	Recommendation	Page No.	Relevant text from manuscript
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	1	... a comparison of patients included in RCTs and prospective cohort studies ...
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2	
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	4	See 'Introduction'
Objectives	3	State specific objectives, including any prespecified hypotheses	4	... these patients were assumed to be comparable with patients seen in daily clinical practice. If these patients differ compared with the patients in the RCTs, it could indicate that some patient groups were indeed not represented in the RCTs.(13) Therefore, we aimed to compare patients in RCTs with patients in observational cohort studies that received APM for a degenerative meniscus tear.
Methods				
Study design	4	Present key elements of study design early in the paper	5-6	2 patient groups were compared: patients from the 2 cohort studies that received APM and patients included in the 4 RCTs that either received in the APM or the control treatment.

Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	5	From a previously performed individual participant data meta-analysis (IPDMA),(14) we had access to the data from 4 RCTs (SLAMSHAM, n = 44, Denmark, OMEX, n = 140, Norway, ESCAPE, n = 319, Netherlands, and Yim et al., n = 102, South-Korea) (15–18) which were used to identify subgroups of patients with degenerative meniscus tears who might benefit from APM.(14)
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	8	The individual participant data from 605 RCT and 1,573 cohort patients were analysed. Within the FIDELITY study, 167 participants were excluded for not meeting the specified inclusion criteria, i.e., age between 35–65 years, persistent medial knee pain, and MRI-confirmed medial meniscus injury. Meanwhile, from the KACS cohort, 41 patients who had undergone meniscal repair were identified and subsequently excluded. After exclusion, 1970 patients remained, of which 1,365 received APM in the cohorts, 300 received APM in the RCTs, and 305 were controls (non-surgical/sham treatment) in the RCTs (Figure 1).

		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case	NA	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	5	From the 6 studies, patient characteristics (age, sex, history of knee symptoms, body mass index [BMI]), clinical variables (severity of knee osteoarthritis using Kellgren-Lawrence [KL] grade or the International Cartilage Repair Society [ICRS] score), knee specific scores (Knee injury and Osteoarthritis Outcome Scale [KOOS], Subjective Knee Form of the International Knee Documentation Committee [IKDC]] or the Lysholm knee score scale), health-related quality of life scores (derived from the 36-Item Short Form Survey [SF-36]), and study information (assigned treatment, sample size, setting, crossover etc.) were collected at baseline. Because these knee specific- and health-related quality of life scores were evaluated using a variety of instruments, we standardized these scales to a uniform scale (0–100) to ensure consistency across the studies.

Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	5	See 'Patients and methods'
Bias	9	Describe any efforts to address potential sources of bias	6	All data were validated, checked for missing values and previously published results were replicated. Inconsistencies were discussed and resolved with the original investigators. Missing data were assumed to be missing at random and multilevel multiple imputation was used to impute sporadically missing values.(19) Details about the imputation of missing values are included in the Appendix.
Study size	10	Explain how the study size was arrived at	8	The individual participant data from 605 RCT and 1,573 cohort patients were analysed. Within the FIDELITY study, 167 participants were excluded for not meeting the specified inclusion criteria, i.e., age between 35–65 years, persistent medial knee pain, and MRI-confirmed medial meniscus injury. Meanwhile, from the KACS cohort, 41 patients who had undergone meniscal repair were identified and subsequently excluded. After exclusion, 1970 patients remained, of which 1,365 received APM in the cohorts, 300 received APM in the RCTs, and 305 were controls

				(non-surgical/sham treatment) in the RCTs (Figure 1).
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	5-6-7	See 'Patients and Methods'
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	6-7	We employed a comprehensive analysis to assess the balance between the RCT and cohort groups for both continuous and categorical covariates.(21) For continuous covariates, we generated density plots, empirical cumulative distribution function (eCDF) plots, …
		(*b*) Describe any methods used to examine subgroups and interactions	NA	
		(*c*) Explain how missing data were addressed	6	Missing data were assumed to be missing at random and multilevel multiple imputation was used to impute sporadically missing values.(19) Details about the imputation of missing values are included in Supplement 1.
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	NA	
		(*e*) Describe any sensitivity analyses	NA	
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	8	After exclusion, 1970 patients remained, of which 1,365 received APM in the cohorts, 300 received APM in the RCTs, and 305 were

				controls (non-surgical/sham treatment) in the RCTs (Figure 1).
		(b) Give reasons for non-participation at each stage	8	
		(c) Consider use of a flow diagram	Figure 1	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Table 1	
		(b) Indicate number of participants with missing data for each variable of interest	Supplement 1	
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	NA	*Only compared at baseline*
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	NA	*Only compared at baseline*
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	NA	
		Cross-sectional study—Report numbers of outcome events or summary measures	NA	
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	8-9	
		(*b*) Report category boundaries when continuous variables were categorized	NA	
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA	
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	NA	
Discussion				
Key results	18	Summarise key results with reference to study objectives	9	While both groups were largely consistent with small differences in terms of knee pain, overall knee function, and quality of life, we noted some distinctions. Specifically, the cohort studies tended to include younger patients and had a higher proportion of patients with osteoarthritis grade 1, while the RCTs had more patients with osteoarthritis grade 2.

Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	10	See 'Limitations' in 'Discussion'
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	11	See 'Discussion'
Generalisability	21	Discuss the generalisability (external validity) of the study results	11	See 'Discussion'
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	7-8	All principal investigators provided written confirmation that all participants included in the original trials and cohorts had given informed consent. This work was supported by the Junior Research project (2018) grant provided by the Radboud Institute for Health Sciences, Radboud University Medical Centre, Nijmegen, The Netherlands and by a TOP grant by the Netherlands Organization for Health Research and Development (ZonMW) Number: 91215058. Study data can be requested from the original principal investigators. JBT reports a research grant from Pfizer outside the submitted work (completed in 2022). All other authors have no conflicts of interest to declare. Completed disclosure forms for this article following the ICMJE template are available on the article page, doi: ****

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.