| Section \＆ Topic | Item No | Item | Reported on Page Number／ Line Number | Reported on Section／ Paragraph |
| :---: | :---: | :---: | :---: | :---: |
| TITLE OR ABSTRACT |  |  |  |  |
|  | 1 | Identification as a study of diagnostic accuracy using at least one measure of accuracy（such as sensitivity，specificity，predictive values，or AUC） | Pagel／line2 | Title |
| ABSTRACT |  |  |  |  |
|  | 2 | Structured summary of study design，methods，results，and conclusions（for specific guidance，see STARD for Abstracts） | $\begin{array}{\|l} \hline \begin{array}{l} \text { Page1/ line26-34, } \\ \text { Dana)/lina1-15 } \end{array} \\ \hline \end{array}$ | Abstract／Paragragh1－4 |
| INTRODUCTION |  |  |  |  |
|  | 3 | Scientific and clinical background，including the intended use and clinical role of the index test | $\begin{array}{\|l} \text { Page2/line23-23, } \\ \text { Dュゥロ2/lina1-75 } \\ \hline \end{array}$ | $\underset{2}{\mid \text { Introduction/Paragragh1 }}$ |
|  | 4 | Study objectives and hypotheses | Page3／line26－30 | Introduction／Paragragh4 |
| METHODS |  |  |  |  |
| Study design | 5 | Whether data collection was planned before the index test and reference standard were performed（prospective study）or after （retrospective study） | Page3／line34，Page4 ／line1－17 | Database／Paragragh1 |
| Participants | 6 | Eligibility criteria | Page4／line20－24 | Study population and varighla／Dararmach 1 |
|  | 7 | On what basis potentially eligible participants were identified（such as symptoms，results from previous tests，inclusion in registry） | Page4／line25－33 | Study population and vorioh1a／Daromrorh 1 |
|  | 8 | Where and when potentially eligible participants were identified（setting，location and dates） | Page4／line20－33 | Study population and variohla／Doracranh 1 |
|  | 9 | Whether participants formed a consecutive，random or convenience series | n／a | n／a |
| Test methods | 10a | Index test，in sufficient detail to allow replication | Page4／line2 1－23 | Study population and |
|  | 10b | Reference standard，in sufficient detail to allow replication | Page7／line1－9 | Results／Paragragh3 |
|  | 11 | Rationale for choosing the reference standard（if alternatives exist） | Page8／line18－34 | Results／Paragragh8 |
|  | 12a | Definition of and rationale for test positivity cut－offs or result categories of the index test，distinguishing pre－specified from exploratory | n／a | n／a |
|  | 12b | Definition of and rationale for test positivity cut－offs or result categories of the reference standard，distinguishing pre－specified from exploratory | n／a | n／a |
|  | 13a | Whether clinical information and reference standard results were available to the performers／readers of the index test | Page6／line11－23 | Results／Paragragh1－2 |
|  | 13b | Whether clinical information and index test results were available to the assessors of the reference standard | $\begin{array}{\|l} \begin{array}{l} \text { Page7/ line12-34, Pa } \\ \text { aod /lino1_15 } \end{array} \\ \hline \end{array}$ | $\begin{aligned} & \text { Results/Paragragh4- } \\ & 7 \end{aligned}$ |


| Analysis | 14 | Methods for estimating or comparing measures of diagnostic accuracy | Page5/line23-30 | Statistical analysis and madal |
| :---: | :---: | :---: | :---: | :---: |
|  | 15 | How indeterminate index test or reference standard results were handled | Page5/line14-19 | Statistical analysis and mndal |
|  | 16 | How missing data on the index test and reference standard were handled | Page20/line20-22 | Statistical analysis and mndal |
|  | 17 | Any analyses of variability in diagnostic accuracy, distinguishing pre-specified from exploratory | Page6/line1-7 | Statistical analysis and mndal |
|  | 18 | Intended sample size and how it was determined | n/a | n/a |
| RESULTS |  |  |  |  |
| Participants | 19 | Flow of participants, using a diagram | Page6/line11-22 | $\begin{array}{\|l} \hline \begin{array}{l} \text { Results/Paragragh1,Figu } \\ \text { ura1 } \end{array} \\ \hline \end{array}$ |
|  | 20 | Baseline demographic and clinical characteristics of participants | Page6/line23-32 | $\begin{array}{\|l} \begin{array}{l} \text { Results/ Paragragh2, } \\ \text { Tحhla1 } \end{array} \\ \hline \end{array}$ |
|  | 21a | Distribution of severity of disease in those with the target condition | Page7/line1-9 | Results/Paragragh2,Tabl an |
|  | 21b | Distribution of alternative diagnoses in those without the target condition | n/a | n/a |
|  | 22 | Time interval and any clinical interventions between index test and reference standard | n/a | n/a |
| Test results | 23 | Cross tabulation of the index test results (or their distribution) by the results of the reference standard | n/a | n/a |
|  | 24 | Estimates of diagnostic accuracy and their precision (such as 95\% confidence intervals) | Page7/line1-34,Page 8/lino1-15 | Results/Paragragh3-6 |
|  | 25 | Any adverse events from performing the index test or the reference standard | n/a | n/a |
| DISCUSSION |  |  |  |  |
|  | 26 | Study limitations, including sources of potential bias, statistical uncertainty, and generalisability | $\begin{aligned} & \text { Page11/ line28-34, } \\ & \text { D } 2 \text { no1 } / \text { lino1 } \end{aligned}$ | Discussion/Paragragh7 |
|  | 27 | Implications for practice, including the intended use and clinical role of the index test | Page9/line2 1-34, Pa noin /linal | Conclusions/Paragrah1 |
| OTHER INFORMATION |  |  |  |  |
|  | 28 | Registration number and name of registry | n/a | n/a |
|  | 29 | Where the full study protocol can be accessed | n/a | n/a |
|  | 30 | Sources of funding and other support; role of funders | Page12/line14-21 | Funding |

 Authors can use the list to write informative study reports. Editors and peer-reviewers can use it to evaluate whether the information has been included in manuscripts submitted for publication.

## Explanation


 other method for collecting information about the current health status of a patient.

 An accuracy study can rely on one or more reference standards.


 estimates of accuracy can then be calculated to quantify the statistical precision of the measurements.

 a single numerical value about the overall diagnostic accuracy of the index test.
 pathway. A replacement test, for example, replaces an existing test. A triage test is used before an existing test; an add-on test is used after an existing test.
 such as staging or prognosis. The STARD list was not explicitly developed for these other outcomes, statistics, and study types, although most STARD items would still apply.

## DEVELOPMENT


 list represents an update of the first version, which was published in 2003. More information can be found on http://www.equator-network.org/reporting-guidelines/stard.

[^0]
[^0]:    Article information: https://dx.doi.org/10.21037/apm-21-3424
    *As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.

