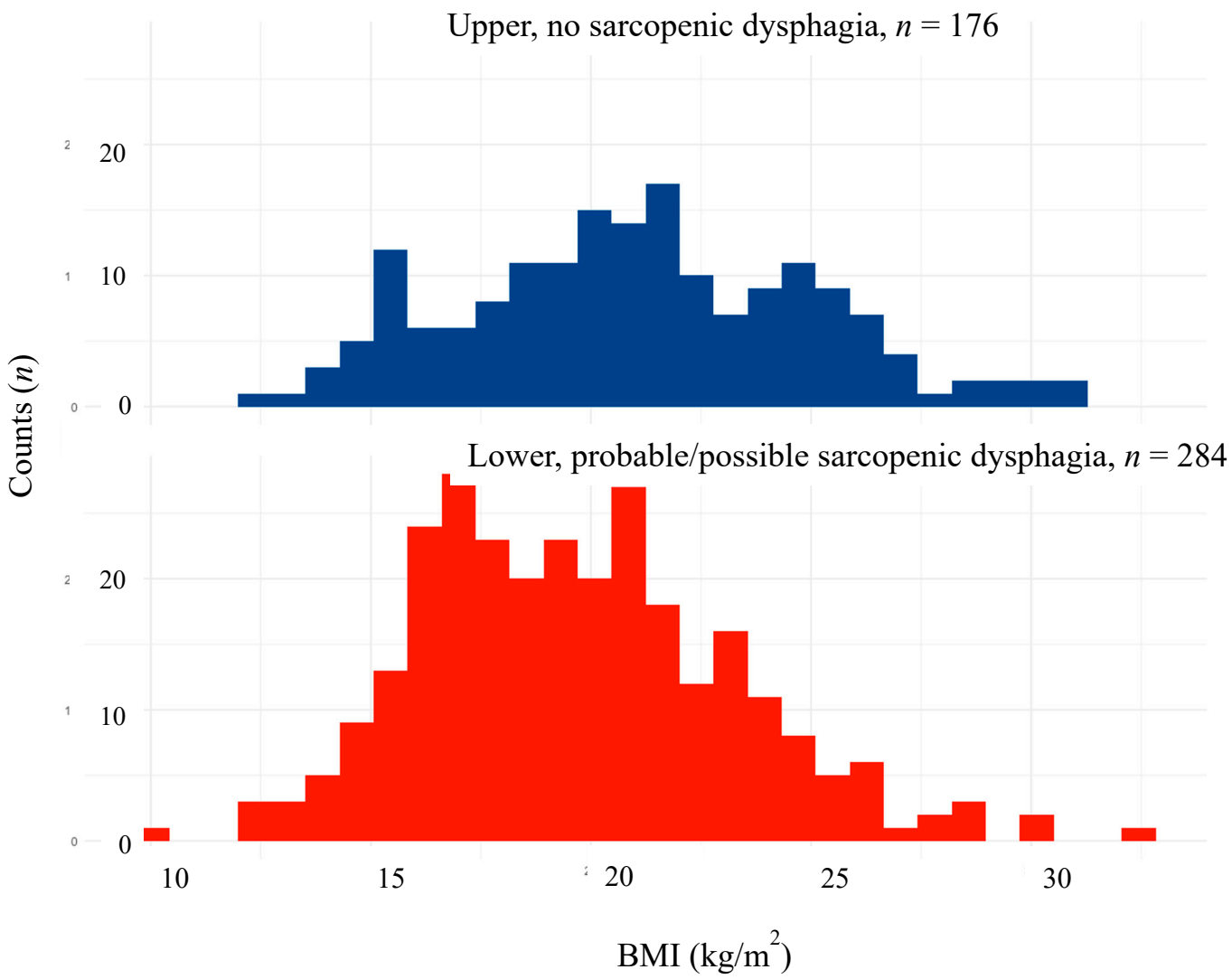

Supplementary Figure S1. The histogram of BMI in patients with and without sarcopenic dysphagia.

Supplementary Table S1. STARD 2015 checklist.

Section & Topic	No	Item	Reported on Page No.
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)	P1
ABSTRACT			
	2	Structured summary of study design, methods, results, and conclusions (for specific guidance, see STARD for Abstracts)	P1
INTRODUCTION			
	3	Scientific and clinical background, including the intended use and clinical role of the index test	P1–2
	4	Study objectives and hypotheses	P2
METHODS			
Study design	**5**	Whether data collection was planned before the index test and reference standard were performed (prospective study) or after (retrospective study)	P2
Participants	**6**	Eligibility criteria	p3
	7	On what basis potentially eligible participants were identified (such as symptoms, results from previous tests, inclusion in registry)	P2–3
	8	Where and when potentially eligible participants were identified (setting, location and dates)	P2–3
	9	Whether participants formed a consecutive, random or convenience series	P3, 11
Test methods	**10a**	Index test, in sufficient detail to allow replication	P3
	10b	Reference standard, in sufficient detail to allow replication	P3
	11	Rationale for choosing the reference standard (if alternatives exist)	P3
	12a	Definition of and rationale for test positivity cut-offs or result categories of the index test, distinguishing pre-specified from exploratory	-
	12b	Definition of and rationale for test positivity cut-offs or result categories of the reference standard, distinguishing pre-specified from exploratory	-
	13a	Whether clinical information and reference standard results were available to the performers/readers of the index test	P4
	13b	Whether clinical information and index test results were available to the assessors of the reference standard	P4
Analysis	**14**	Methods for estimating or comparing measures of diagnostic accuracy	P4
	15	How indeterminate index test or reference standard results were handled	P4
	16	How missing data on the index test and reference standard were handled	P4
	17	Any analyses of variability in diagnostic accuracy, distinguishing pre-specified from exploratory	P4
	18	Intended sample size and how it was determined	-
RESULTS			
Participants	**19**	Flow of participants, using a diagram	P4, Figure1
	20	Baseline demographic and clinical characteristics of participants	P4, Table1
	21a	Distribution of severity of disease in those with the target condition	Table1, Figure S1
	21b	Distribution of alternative diagnoses in those without the target condition	-

	22	Time interval and any clinical interventions between index test and reference standard	Table1
Test results	**23**	Cross tabulation of the index test results (or their distribution) by the results of the reference standard	Table3
	24	Estimates of diagnostic accuracy and their precision (such as 95% confidence intervals)	Table3, Figure2
	25	Any adverse events from performing the index test or the reference standard	P4
DISCUSSION			
	26	Study limitations, including sources of potential bias, statistical uncertainty, and generalisability	P11
	27	Implications for practice, including the intended use and clinical role of the index test	P10
OTHER INFORMATION			
	28	Registration number and name of registry	P2, P12
	29	Where the full study protocol can be accessed	-
	30	Sources of funding and other support; role of funders	P11

Supplementary Table S2: Sensitivity and specificity for sarcopenic dysphagia for overall.

BMI (kg/m²)	Sensitivity	95%CI			Specificity	95%CI		
30.05	99.6	98.9	-	100.0	2.3	0.6	-	4.5
28.75	98.9	97.5	-	100.0	4.0	1.7	-	6.8
28.3	98.2	96.5	-	99.6	4.5	1.7	-	8.0
28.05	97.9	96.1	-	99.3	5.1	2.3	-	8.5
26.5	96.8	94.4	-	98.6	8.0	4.0	-	12.5
26.25	96.5	94.0	-	98.2	9.7	5.7	-	14.2
26.15	95.8	93.3	-	97.9	10.2	5.7	-	14.8
25.55	94.7	91.9	-	97.2	14.8	9.7	-	20.5
25.45	94.0	91.2	-	96.5	15.9	10.8	-	21.6
25.25	93.0	89.8	-	95.8	16.5	11.4	-	22.2
24.95	91.5	88.4	-	94.7	17.6	11.9	-	23.9
24.85	91.2	87.7	-	94.4	18.2	12.5	-	24.4
24.65	90.8	87.7	-	94.0	21.0	15.3	-	27.3
24.45	90.5	87.0	-	93.7	22.2	15.9	-	28.4
24.35	90.1	86.6	-	93.3	22.7	16.5	-	29.0
24.15	89.8	86.3	-	93.0	23.9	17.6	-	30.7
24.05	89.1	85.2	-	92.3	25.6	18.8	-	32.4
23.8	87.3	83.5	-	91.2	26.7	19.9	-	33.5
23.65	87.0	83.1	-	90.8	27.8	21.0	-	34.7
23.45	85.9	82.0	-	90.1	28.4	21.6	-	35.2
23.35	85.2	81.0	-	89.1	29.5	22.7	-	36.4
23.15	84.2	79.6	-	88.4	30.1	23.3	-	36.9
23.05	83.1	78.5	-	87.3	30.7	23.9	-	37.5
22.85	82.0	77.5	-	86.3	31.3	23.9	-	38.1
22.75	80.6	76.1	-	85.2	31.8	25.0	-	39.2
22.55	79.9	75.4	-	84.5	34.1	26.7	-	41.5
22.45	79.6	75.0	-	84.2	35.2	27.8	-	42.0
22.25	78.2	73.2	-	83.1	36.9	29.5	-	44.3
22.15	77.5	72.5	-	82.4	37.5	30.1	-	44.9
21.95	75.7	70.8	-	80.6	38.6	31.3	-	46.0
21.85	74.6	69.7	-	79.6	41.5	34.1	-	48.9
21.55	71.5	66.2	-	76.4	44.3	36.9	-	51.7
21.35	71.1	65.8	-	76.1	47.2	39.8	-	54.5
21.05	69.0	63.7	-	74.3	48.9	41.5	-	56.3
20.95	67.3	62.0	-	72.5	49.4	42.0	-	56.8
20.85	66.5	60.9	-	71.8	50.6	43.2	-	58.0
20.7	65.5	59.9	-	70.8	51.1	43.8	-	58.5
20.55	63.0	57.4	-	68.7	52.8	45.5	-	59.7
20.45	60.6	54.9	-	66.2	55.1	47.7	-	62.5
20.35	59.5	53.9	-	65.1	56.8	49.4	-	63.7
20.25	59.2	53.5	-	64.8	58.0	51.1	-	64.8
20.15	58.5	52.8	-	64.1	58.5	51.1	-	65.9
20.05	58.1	52.5	-	63.7	60.2	52.8	-	67.0
19.85	56.0	50.0	-	61.6	61.4	54.0	-	68.2
19.75	54.9	48.9	-	60.6	63.1	55.7	-	69.9
19.55	53.5	47.5	-	59.2	65.3	58.5	-	72.2
19.45	52.1	46.1	-	57.7	67.6	60.8	-	74.4

19.35	50.0	44.0	-	55.3	68.2	61.4	-	75.0
19.25	48.9	43.0	-	54.2	68.8	61.9	-	75.0
19.05	46.8	40.8	-	52.1	69.3	62.5	-	75.6
18.95	45.4	39.8	-	51.1	69.9	63.1	-	76.7
18.75	44.7	39.1	-	50.4	71.6	64.8	-	77.8
18.65	44.4	38.4	-	50.0	72.2	65.3	-	78.4
18.55	43.7	38.0	-	49.3	72.7	65.9	-	79.0
18.35	40.5	34.9	-	46.1	74.4	68.2	-	80.7
18.25	39.1	33.8	-	44.7	76.1	69.3	-	81.8
17.95	36.6	31.3	-	41.9	77.3	71.0	-	83.0
17.75	35.2	29.9	-	40.5	77.8	71.6	-	83.5
17.65	33.1	28.2	-	38.4	78.4	72.2	-	84.1
17.55	32.4	27.5	-	37.7	80.1	73.9	-	85.8
17.45	31.3	26.1	-	36.6	80.7	74.4	-	86.4
17.25	28.5	23.6	-	33.5	81.3	75.0	-	86.9
16.95	24.6	20.1	-	29.6	83.5	77.8	-	88.6
16.65	20.4	15.8	-	25.0	84.1	78.4	-	89.2
16.55	19.0	14.4	-	23.6	84.7	79.5	-	89.8
16.25	14.4	10.6	-	18.3	85.8	80.7	-	90.9
16.15	14.1	10.2	-	18.0	86.4	81.3	-	90.9
16.05	13.7	9.9	-	17.6	86.9	81.8	-	91.5
15.95	13.0	9.5	-	16.9	87.5	82.4	-	92.0
15.75	10.9	7.7	-	14.4	89.2	84.7	-	93.8
15.65	10.2	7.0	-	13.7	89.8	85.2	-	93.8
15.45	9.5	6.3	-	12.7	91.5	87.5	-	95.5
15.25	8.1	4.9	-	11.3	92.6	88.6	-	96.0
15.05	7.4	4.6	-	10.2	94.3	90.9	-	97.7
14.85	6.0	3.5	-	8.8	94.9	91.5	-	97.7
14.75	5.6	3.2	-	8.5	96.0	93.2	-	98.9
14.55	5.3	2.8	-	7.7	96.6	93.8	-	98.9
14.25	4.2	2.1	-	6.7	97.2	94.3	-	99.4
14.15	3.5	1.8	-	5.6	97.7	95.5	-	99.4
13.95	3.2	1.4	-	5.3	98.3	96.0	-	100.0
13.45	2.5	0.7	-	4.2	99.4	98.3	-	100.0
12.15	0.7	0.0	-	1.8	100.0	100.0	-	100.0

CI were obtained by 2000 stratified bootstrap. Abbreviations; CI, confidence interval.

Supplementary Table S3: Sensitivity and specificity for sarcopenic dysphagia for male.

BMI (kg/m²)	Sensitivity	95%CI			Specificity	95%CI		
30.15	99.2	97.6	-	100.0	2.9	0.0	-	6.7
28.4	98.4	96.0	-	100.0	5.8	1.9	-	10.6
26.6	96.8	93.6	-	99.2	6.7	2.9	-	11.5
26.25	96.0	92.0	-	99.2	8.7	3.8	-	14.4
25.55	93.6	88.8	-	97.6	11.5	5.8	-	18.3
25.45	92.8	88.0	-	96.8	12.5	6.7	-	19.2
25.25	92.0	87.2	-	96.8	13.5	7.7	-	20.2
24.9	91.2	86.4	-	96.0	15.4	8.7	-	23.1
24.65	90.4	84.8	-	95.2	19.2	12.5	-	26.9
24.05	88.8	83.2	-	93.6	24.0	16.3	-	32.7
23.6	86.4	80.0	-	92.0	26.0	18.2	-	34.6
23.45	85.6	79.2	-	91.2	26.9	18.3	-	35.6
23.35	84.0	76.8	-	89.6	28.8	20.2	-	37.5
23.15	82.4	75.2	-	88.8	29.8	21.2	-	38.5
23.05	80.8	73.6	-	87.2	30.8	22.1	-	39.4
22.55	76.0	68.0	-	83.2	32.7	24.0	-	41.3
22.45	75.2	68.0	-	82.4	34.6	26.0	-	43.3
22.25	73.6	65.6	-	80.8	35.6	26.9	-	44.2
21.95	69.6	61.6	-	76.8	36.5	27.9	-	45.2
21.85	68.0	59.2	-	76.0	38.5	29.8	-	48.1
21.35	65.6	57.6	-	73.6	46.2	36.5	-	55.8
21.05	64.0	55.2	-	72.0	48.1	39.4	-	57.7
20.85	62.4	53.6	-	70.4	51.0	41.3	-	60.6
20.7	61.6	52.8	-	69.6	51.9	42.3	-	61.5
20.55	58.4	49.6	-	66.4	54.8	46.1	-	64.4
20.45	53.6	44.8	-	62.4	56.7	47.1	-	66.3
20.35	52.8	44.0	-	61.6	59.6	50.0	-	68.3
20.25	52.0	44.0	-	60.8	61.5	52.9	-	70.2
20.05	50.4	41.6	-	59.2	64.4	54.8	-	73.1
19.85	49.6	40.8	-	58.4	65.4	56.7	-	74.0
19.55	48.8	40.0	-	57.6	68.3	59.6	-	76.9
19.45	48.0	39.2	-	56.8	71.2	62.5	-	79.8
19.35	47.2	38.4	-	56.0	72.1	63.5	-	80.8
19.05	44.0	35.2	-	52.8	73.1	64.4	-	80.8
18.95	43.2	34.4	-	52.0	74.0	65.4	-	81.7
18.8	42.4	33.6	-	51.2	75.0	66.3	-	82.7
18.55	41.6	33.6	-	50.4	76.0	67.3	-	83.7
18.35	37.6	29.6	-	46.4	78.8	70.2	-	85.6
18.15	36.0	28.0	-	44.0	80.8	73.1	-	87.5
17.95	34.4	26.4	-	43.2	82.7	75.0	-	89.4
17.75	33.6	25.6	-	42.4	83.7	76.0	-	90.4
17.65	31.2	23.2	-	39.2	84.6	76.9	-	91.3
16.95	26.4	18.4	-	34.4	87.5	80.8	-	93.3
16.65	21.6	14.4	-	28.8	88.5	81.7	-	94.2
15.95	14.4	8.8	-	20.8	91.3	85.6	-	96.2
15.65	10.4	5.6	-	16.0	93.3	88.5	-	97.1
15.25	6.4	2.4	-	11.2	95.2	90.4	-	99.0

14.55	4.0	0.8	-	8.0	97.1	93.3	-	100.0
14.25	2.4	0.0	-	5.6	98.1	95.2	-	100.0
13.95	1.6	0.0	-	4.0	99.0	97.1	-	100.0

CI were obtained by 2000 stratified bootstrap. Abbreviations; CI, confidence interval.

Supplementary Table S4: Sensitivity and specificity for sarcopenic dysphagia for female

BMI (kg/m²)	Sensitivity	95%CI			Specificity	95%CI		
30.05	100.0	100.0	-	100.0	1.4	0.0	-	4.2
28.3	98.1	95.6	-	100.0	2.8	0.0	-	6.9
27.7	97.5	95.0	-	100.0	4.2	0.0	-	9.7
26.15	96.9	93.7	-	99.4	12.5	5.6	-	20.8
25.65	95.6	92.5	-	98.7	19.4	11.1	-	29.2
25.45	95.0	91.2	-	98.1	20.8	12.5	-	30.6
24.45	91.2	86.8	-	95.0	26.4	16.7	-	36.1
24.25	90.6	86.2	-	95.0	27.8	18.1	-	37.5
23.8	88.1	83.0	-	93.1	29.2	19.4	-	40.3
23.65	87.4	82.4	-	92.5	30.6	20.8	-	41.7
22.85	84.3	78.0	-	89.9	31.9	20.8	-	43.1
22.5	83.0	76.7	-	88.7	36.1	25.0	-	47.2
22.15	81.8	75.5	-	87.4	40.3	29.2	-	51.4
21.95	80.5	74.2	-	86.8	41.7	30.6	-	52.8
21.85	79.9	73.6	-	86.2	45.8	34.7	-	56.9
21.35	75.5	68.6	-	81.8	48.6	37.5	-	59.7
21.05	73.0	66.0	-	79.9	50.0	38.9	-	61.1
20.45	66.0	58.5	-	73.0	52.8	41.7	-	63.9
20.1	64.2	57.2	-	71.7	54.2	43.1	-	65.3
19.85	61.0	53.5	-	68.6	55.6	44.4	-	66.7
19.75	59.7	52.2	-	67.3	56.9	45.8	-	68.1
19.55	57.2	49.7	-	64.8	61.1	50.0	-	72.2
19.45	55.3	47.8	-	62.9	62.5	51.4	-	73.6
19.25	51.6	44.0	-	59.1	63.9	52.8	-	75.0
18.7	46.5	39.0	-	54.1	66.7	56.9	-	77.8
18.55	45.3	37.7	-	52.8	68.1	58.3	-	79.2
18.25	41.5	34.0	-	49.1	69.4	58.3	-	80.6
17.55	34.0	27.0	-	41.5	73.6	63.9	-	83.3
17.45	32.1	25.2	-	39.0	75.0	65.3	-	84.7
17.25	28.9	22.0	-	35.8	76.4	66.7	-	86.1
16.95	23.3	17.0	-	30.2	77.8	68.1	-	87.5
16.55	19.5	13.8	-	25.8	79.2	69.4	-	87.5
16.25	14.5	9.4	-	20.1	80.6	70.8	-	88.9
16.05	13.2	8.2	-	18.2	81.9	72.2	-	90.3
15.75	11.3	6.9	-	16.4	84.7	76.4	-	93.1
15.3	9.4	5.0	-	13.8	88.9	80.6	-	95.8
15.05	8.8	5.0	-	13.2	93.1	86.1	-	98.6
14.75	6.9	3.1	-	10.7	95.8	90.3	-	100.0
14.15	5.0	1.9	-	8.2	97.2	93.1	-	100.0
13.45	4.4	1.9	-	7.5	100.0	100.0	-	100.0

CI were obtained by 2000 stratified bootstrap. Abbreviations; CI, confidence interval.