

## Supplementary Table 1 Detailed search queries per database

### Original search (28-Sept-2021) - no restrictions

#### PubMed:

("Pulmonary Disease, Chronic Obstructive"[Mesh] OR copd[Title/Abstract] OR "chronic obstructive pulmonary disease"[Title/Abstract]) AND ("Heart Failure"[Mesh] OR "heart failure"[Title/Abstract]) AND (predict\*[Title/Abstract] OR "Prognosis"[Mesh] OR prognos\*[Title/Abstract] OR "Biomarkers"[Mesh] OR biomarker\*[Title/Abstract] OR marker\*[Title/Abstract])  
2,035 results

#### Scopus (Elsevier):

(TITLE-ABS-KEY (copd OR "chronic obstructive pulmonary disease") AND TITLE-ABS-KEY("heart failure") AND TITLE-ABS-KEY(predict\* OR prognos\* OR biomarker\* OR marker\*))  
2,157 results

#### Web of Science (Clarivate):

(TS=(copd) OR TS=("chronic obstructive pulmonary disease")) AND TS=("heart failure") AND (TS=(predict\*) OR TS=(prognos\*) OR TS=(biomarker\*) OR TS=(marker\*))  
1,809 results

#### Cochrane Library:

#1 MeSH descriptor: [Pulmonary Disease, Chronic Obstructive] explode all trees  
#2 MeSH descriptor: [Heart Failure] explode all trees  
#3 MeSH descriptor: [Prognosis] explode all trees  
#4 MeSH descriptor: [Biomarkers] explode all trees  
#5 (copd OR "chronic obstructive pulmonary disease"):ti,ab,kw  
#6 ("heart failure"):ti,ab,kw  
#7 (predict\* OR prognos\* OR biomarker\* OR marker\*):ti,ab,kw  
#8 (#1 OR #5) AND (#2 OR #6) AND (#3 OR #4 OR #7)  
273 results

#### Embase (Elsevier):

(copd:ti,ab,kw OR 'chronic obstructive lung disease':ti,ab,kw) AND 'heart failure':ti,ab,kw AND (predict\*:ti,ab,kw OR prognos\*:ti,ab,kw OR biomarker\*:ti,ab,kw OR 'biological marker':ti,ab,kw OR marker\*:ti,ab,kw)  
2,143 results

#### CINAHL (EBSCOhost):

TI("chronic obstructive pulmonary disease" OR copd OR "chronic obstructive airway disease" OR "chronic obstructive lung disease") AND TI("heart failure" OR "cardiac failure" OR chf OR "chronic heart failure" OR "congestive heart failure") AND AB(predict\* OR prognos\* OR biomarker\* OR marker\*)  
39 results

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TOTAL: 8,456 results

Deduplication method (29-9-2021):

After deduplication in EndNote X9.3.3: 5,389 (3,067 duplicates removed)

After deduplication in Covidence: 4,695 (694 duplicates removed)  
Number of records for title-abstract screening in ASReview: 4,695

## Search Update (24-Apr-2023) - restrictions: Year 2021-2023

### PubMed:

("Pulmonary Disease, Chronic Obstructive"[Mesh] OR copd[Title/Abstract] OR "chronic obstructive pulmonary disease"[Title/Abstract]) AND ("Heart Failure"[Mesh] OR "heart failure"[Title/Abstract]) AND (predict\*[Title/Abstract] OR "Prognosis"[Mesh] OR prognos\*[Title/Abstract] OR "Biomarkers"[Mesh] OR biomarker\*[Title/Abstract] OR marker\*[Title/Abstract])  
469 results

### Scopus (Elsevier):

( TITLE-ABS-KEY ( copd OR "chronic obstructive pulmonary disease" ) AND TITLE-ABS-KEY ( "heart failure" ) AND TITLE-ABS-KEY ( predict\* OR prognos\* OR biomarker\* OR marker\* ) ) AND ( LIMIT-TO ( PUBYEAR , 2024 ) OR LIMIT-TO ( PUBYEAR , 2023 ) OR LIMIT-TO ( PUBYEAR , 2022 ) OR LIMIT-TO ( PUBYEAR , 2021 ) )  
532 results

### Web of Science (Clarivate):

(TS=(copd) OR TS=("chronic obstructive pulmonary disease")) AND TS=("heart failure") AND (TS=(predict\*) OR TS=(prognos\*) OR TS=(biomarker\*) OR TS=(marker\*))  
432 results

### Cochrane Library:

#1 MeSH descriptor: [Pulmonary Disease, Chronic Obstructive] explode all trees  
#2 MeSH descriptor: [Heart Failure] explode all trees  
#3 MeSH descriptor: [Prognosis] explode all trees  
#4 MeSH descriptor: [Biomarkers] explode all trees  
#5 (copd OR "chronic obstructive pulmonary disease"):ti,ab,kw  
#6 ("heart failure"):ti,ab,kw  
#7 (predict\* OR prognos\* OR biomarker\* OR marker\*):ti,ab,kw  
#8 (#1 OR #5) AND (#2 OR #6) AND (#3 OR #4 OR #7)  
59 results

### Embase (Elsevier):

(copd:ti,ab,kw OR 'chronic obstructive lung disease':ti,ab,kw) AND 'heart failure':ti,ab,kw AND (predict\*:ti,ab,kw OR prognos\*:ti,ab,kw OR biomarker\*:ti,ab,kw OR 'biological marker':ti,ab,kw OR marker\*:ti,ab,kw)  
415 results

### CINAHL (EBSCOhost):

TI("chronic obstructive pulmonary disease" OR copd OR "chronic obstructive airway disease" OR "chronic obstructive lung disease") AND TI("heart failure" OR "cardiac failure" OR chf OR "chronic heart failure" OR "congestive heart failure") AND AB(predict\* OR prognos\* OR biomarker\* OR marker\*)  
3 results

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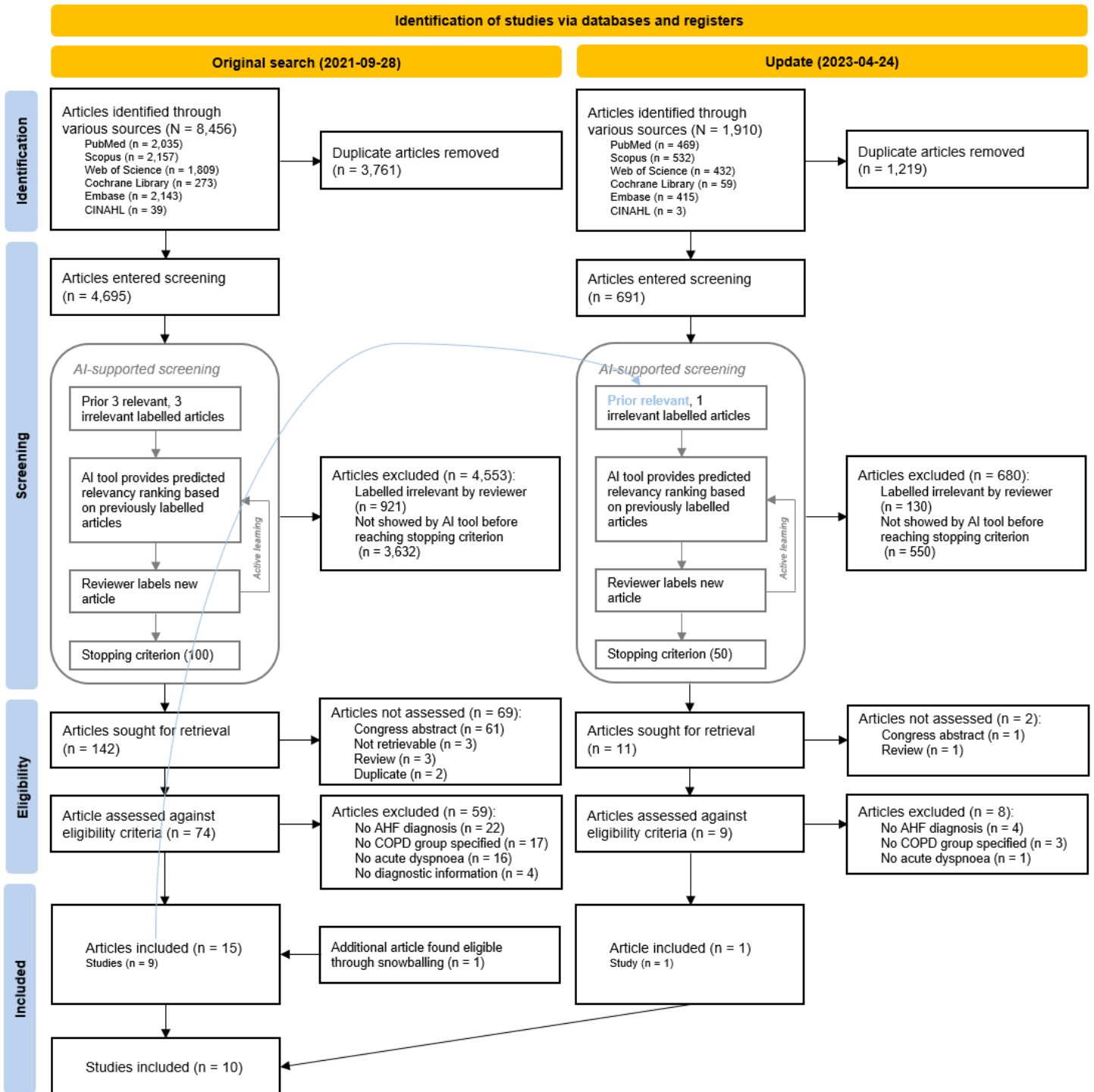
TOTAL: 1,910 results

Deduplication method (28-4-2023):

After deduplication in EndNote X9.3.3: 1,226 (684 duplicates removed)

After deduplication in Covidence: 691 (535 duplicates removed)

Number of records for title-abstract screening in ASReview: 691



**Supplementary Figure 1** Detailed overview of AI-supported article selection

**Supplementary Table 2** Detailed quality assessment (QUADAS-2) table

<b>Bibliographic information</b>	<b>Patient_selection (PS)</b>					<b>Index_test (IT)</b>				<b>Reference_standard (RS)</b>				<b>Flow_and_Timing (FT)</b>				
<b>Author, publication year</b>	<b>A1_PS</b>	<b>A2_PS</b>	<b>A3_PS</b>	<b>A_PS</b>	<b>B_PS</b>	<b>A4_IT</b>	<b>A5_IT</b>	<b>A_IT</b>	<b>B_IT</b>	<b>A6_RS</b>	<b>A7_RS</b>	<b>A_RS</b>	<b>B_RS</b>	<b>A8_FT</b>	<b>A9_FT</b>	<b>A10_FT</b>	<b>A11_FT</b>	<b>A_FT</b>
Dieplinger, 2009, <sup>25</sup> Dieplinger, 2010 <sup>26</sup>	Yes	Yes	Yes	Low risk	Low concern	Yes	No	Low risk	Low concern	Yes	Yes	Low risk	Low concern	Unclear	Yes	No	Yes	Low risk
Fabbian, 2011 <sup>30</sup>	Yes	Yes	Yes	Unclear	Low concern	Unclear	Yes	Low risk	Low concern	Yes	Unclear	Low risk	Low concern	Unclear	Yes	Yes	Yes	Unclear
Gálvez-Barrón, 2019 <sup>41</sup>	Yes	Yes	No	High risk	High concern	Unclear	Yes	High risk	High concern	Yes	Yes	Low risk	Low concern	No	Yes	Unclear	Yes	Unclear
Høiseth, 2016, <sup>42</sup> Winther, 2016, <sup>43</sup> Winther, 2017, <sup>44</sup> Pervez, 2017, <sup>45</sup> Pervez, 2018 <sup>46</sup>	Yes	Yes	Yes	Low risk	Low concern	Unclear	NA	Unclear	Low concern	Yes	Yes	Low risk	Low concern	Yes	No	No	No	High risk
Johannessen, 2023 <sup>47</sup>	No	Yes	Yes	Low risk	Low concern	Yes	Yes	Low risk	Low concern	Yes	Yes	Low risk	Low concern	No	Yes	Unclear	Yes	High risk
McCullough, 2003, <sup>48</sup> Maisel, 2002 <sup>49</sup>	Unclear	Yes	Yes	Unclear	High concern	Yes	Unclear	Unclear	Low concern	Yes	Yes	Low risk	Low concern	Unclear	Yes	No	Yes	High risk
Moon, 2005 <sup>28</sup>	Unclear	Yes	Yes	Low risk	Low concern	Unclear	No	Unclear	Low concern	No	Unclear	High risk	Unclear	Unclear	No	No	Yes	Low risk
Tinë, 2020 <sup>50</sup>	Unclear	Yes	Yes	Unclear	Low concern	Yes	Unclear	Unclear	Unclear	Yes	Yes	Low risk	High concern	Unclear	No	No	Yes	Low risk
Tung, 2006 <sup>29</sup>	Yes	Yes	Yes	Low risk	High concern	Yes	Yes	Low risk	Low concern	Unclear	Yes	Unclear	Low concern	Unclear	Yes	No	No	Low risk
Yamanoğlu, 2015 <sup>31</sup>	Yes	Yes	No	High risk	Low concern	Unclear	No	High risk	Low concern	Yes	Unclear	Low risk	Low concern	Yes	No	Yes	No	High risk