Supplementary appendix

1. Risk of Bias of Included Studies using JBI critical appraisal tool

2.1 Cross-sectional studies

	Authors/year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Overall score	Quality
12	Kibret et al 2022	Y	Y	UC	Y	Y	Y	Y	NA	Y	7	High
13	Deressa et al,2019	Y	N	UC	Y	Y	Y	Y	NA	Y	6	Medium
14	Tesfaw et al, 2021	Y	N	UC	Y	Y	Y	Y	Y	UC	6	Medium
15	Yoseph et al ,2021	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	High
16	Gebretsadik et at,2021	Y	Y	UC	Y	Y	Y	Y	N	UC	6	Medium
17	Dagne et al,2019	Y	Y	Y	N	Y	UC	UC	Y	Y	6	Medium
18	Kantelhardt et al,2013	Y	UC	Y	N	Y	Y	Y	Y	Y	7	High
19	Hailu et al, 2020	Y	UC	UC	Y	Y	Y	Y	Y	Y	7	High

20	Gebremariam et al,2020	Y	Y	Y	N	Y	Y	Y	UC	Y	7	High
21	Memirie et al ,2015	Y	Y	Y	Y	UC	Y	Y	NA	UC	6	Medium
22	Tigeneh et al,2015	Y	Y	Y	NA	Y	Y	Y	NA	Y	6	Medium
23	Gemta al et,2019	Y	Y	UC	N	Y	Y	Y	Y	Y	7	High
24	Tefera et al,2016	Y	Y	UC	Y	Y	Y	Y	NA	Y	7	High
25	Abdu et al,2018	Y	Y	UC	Y	Y	Y	Y	Y	UC	7	High
26	Shenkutie et al,2017	Y	Y	UC	Y	Y	Y	Y	Y	Y	8	High
27	Hassen et al,2021	Y	Y	UC	Y	Y	Y	Y	Y	Y	8	High
28	Hadgu et al ,2018	Y	Y	UC	Y	Y	Y	Y	Y	Y	8	High
29	Ersumo et al,2006	Y	Y	UC	Y	Y	Y	Y	Y	UC	7	High
33	Timotewosa et al,2018	Y	Y	UC	Y	Y	Y	Y	NA	UC	6	Medium

	Interpretation	Y=yes, N=no, U=unclear, NA=not applicable
	low risk bias >=6.5	8
	medium risk bias 6.5-4.5	11
	high risk bias < =4.5	0

2.2 Cohort study

	Authors/year	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Over-all score	Quality
32	Feuchtner al et,2019	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	7	Medium
	Interpretation	Y=yes, N=no, U=unclear, NA=not applicable												
	Low Risk Bias >=8	0												
	Medium Risk Bias 8-6	1												
	High Risk Bias < =6	0												

2. Search Strategy

Data base	Hits	Search
PubMed	107	1.Breast cancer OR Breast carcinoma OR Breast tumor OR Breast malignancy 2. Sign OR Symptom OR Presentation OR molecular subtype OR histology OR Diagnosis OR Stage 3. Surgery OR Chemotherapy OR radiotherapy OR Hormonal therapy OR Immunotherapy 4. Ethiopia 5.1 AND 2 AND 3 AND 4 (Breast cancer OR Breast carcinoma OR Breast tumor OR Breast malignancy) AND (Sign OR Symptom OR Presentation OR molecular subtype OR histology OR Diagnosis OR Stage) AND (Surgery OR Chemotherapy OR radiotherapy OR Hormonal therapy OR Immunotherapy) AND (Ethiopia)
Google Scholar	122	("Breast cancer" |"Breast carcinoma" |"Breast tumor" |"Breast malignancy" AND" Sign "|" Symptom "|" Presentation"|" molecular subtype "|" histology"|" Diagnosis "|" Stage " AND" Surgery "|" Chemotherapy "| radiotherapy "|" Hormonal therapy "|"Immunotherapy" AND" Ethiopia")
Hinari	8	(Breast cancer OR Breast carcinoma OR Breast tumor OR Breast malignancy) AND (Sign OR Symptom OR Presentation OR molecular subtype OR histology OR Diagnosis OR Stage) AND (Surgery OR Chemotherapy OR radiotherapy OR Hormonal therapy OR Immunotherapy) AND (Ethiopia)
African journal online (AJOL)	73	(Breast cancer OR Breast carcinoma OR Breast tumor OR Breast malignancy) AND (Sign OR Symptom OR Presentation OR molecular subtype OR histology OR Diagnosis OR Stage) AND (Surgery OR Chemotherapy OR radiotherapy OR Hormonal therapy OR Immunotherapy) AND (Ethiopia)
Cumulative index to nursing and allied health literature(CINAHL)	42	(Breast cancer OR Breast carcinoma OR Breast tumor OR Breast malignancy) AND (Sign OR Symptom OR Presentation OR molecular subtype OR histology OR Diagnosis OR Stage) AND (Surgery OR Chemotherapy OR radiotherapy OR Hormonal therapy OR Immunotherapy) AND (Ethiopia)

3. PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	4
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	4
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	7&8
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	5
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	5, S4
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	8
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	8
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	8
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	7
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	8, S1-3
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	NA
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	6&7
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	NA
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	NA
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	NA
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	NA

Section and Topic	Item #	Checklist item	Location where item is reported
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	NA
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	NA
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	NA
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	10
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	S8-10
Study characteristics	17	Cite each included study and present its characteristics.	S8-10
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	S1-3
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	S8-10
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	NA
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	NA
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	NA
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	NA
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	NA
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	NA
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	14,15
	23b	Discuss any limitations of the evidence included in the review.	16
	23c	Discuss any limitations of the review processes used.	16
	23d	Discuss implications of the results for practice, policy, and future research.	16
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	5
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	5
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	18
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	18

Section and Topic	Item #	Checklist item	Location where item is reported
Competing interests	26	Declare any competing interests of review authors.	16
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	16

4. Extracted data from included studies

Study ID	Author	Design	Study area	Sample size	Prevalence and pattern		median age	Mean age	Symptom				Stage				Histology findings			Molecular Features			Treatment			
					Female Cancer	All cancer			Lump /mass	Pain	Discharge	LN involvement	I	II	III	IV	Ductal carcinoma	Lobar carcinoma	Others	Poor differentiation	Moderate differentiation	Well differentiation	Surgery	Chemotherapy	Hormonal treatment	Radiotherapy
12	Kibret et al 2022	a retrospective chart review	Wolaita Sodo University Teaching referral Hospital	1,810	37%	25.4%																				
13	Deressa, et al,2019	Retrospective chart review	Hospital-based (GU)	82			45										74%	1%	24%	32%	37%	17%	100%	96%	73%	
14	Tesfaw et al,2021	Cross-Sectional Study	Hospital-based (GUCSH and FHCSH)	371			40		88.4%	56.6 %		10.2%	10%	18.9 %	56.9%	14.3 %	93.5 %	4.9%	1.6%	45.6%	40.7%	13.7%	96.2%	43.9%	13.5%	
15	Yoseph et al ,2021	cross-sectional study	Jimma University Specialized Hospital (JUSH)	116			45		97.9%	31.2 %	12.5%	90.7%	1.9%	21.3 %	64.8%	12%	79.4 %			30%			100%			
16	Gebretsadik et at,2021	Retrospective chart review	Hospital based (HUCSH)	559		18.6%	38						3%	27.4 %	57.4%	12.2 %								100%	30%	
17	Dagne et al,2019	Retrospective chart review	Hospital based (TASH)	303				42.1															85%	90.7		35%

18	Kantelhardt et al ,2013	Prospective cohort	Hospital based (TASH)	1070			43						3.9%	25.3 %	70.8%		79.2 %	5.1%	15.7 %	24.8%	57.2%	18.0%	87%	83%	81%	
19	Hailu et al,2020	Retrospective chart review	Hospital based (SPHMMC)	9261	29.3%		46	47.05									81.6 %	3.9%	10.4 %							
20	Gebremariam et al ,2019	cross-sectional study	Multi center	441				44.4	78.0%	10.2 %	4.3%															
21	Memirie et al ,2015	Retrospective Registry /chart review	Population-Based	10,187	33%	23%																				
22	Tigeneh et al,2015	Retrospective chart review	Hospital based (TASH)	13, 451		26%																				
23	Gemta al et ,2019	Prospective cohort	Hospital based (HUCSH)	197			42	44.77					3%	27.4 %	57.4%	12.2 %	79.2 %	8.1%	12.7 %	36.5%	46.2%	17.3%				
24	Tefera et al,2016	Retrospective chart review	Hospital based (GU)	3231		15.2%																				
25	Abdu et al,2018	cross-sectional study	Hospital based (TASH)	422			40										83.7 %	4.6%	11.7 %	26.6%	42.9%	12.9%				
26	Shenkutie et al,2017	Cross-sectional study	Hospital based (TASH)	137			46.7	47					3%	40%	48.5%	8.5 %	70%	6.2%	23.4 %	35.4%	51.5%	13.1%				
27	Hassen et al,2021	cross-sectional study	Hospital based (DRH)	204				44	57.4%	(34. 3%		14.7%)	5.9%	27.9 %	25.5%	40.2 %										
28	Hadgu et al ,2018	Retrospective chart review	Hospital based (TASH)	114			40	43					20%	39%	37%	4%	68%	6%	26%	34%	28%	6%				
29	Ersumo et al ,2006	Retrospective chart review	Hospital based (TASH)	137			55.8	42.4	96.8%		13.6%	67.2%														

32	Feuchtner,2019	retrospective cohort	Population-based	588		21.2%							2%	9.9%	12.7%	38.8 %										
33	Timotewosa et al ,2018	Retrospective Registry /chart review	Population based	4139	31.5%																					