



EUROPEAN COMMISSION  
JOINT RESEARCH CENTRE

Directorate F - Health, Consumers & Reference Materials (Ispra)  
**Health in Society**

# European Commission Initiative on Breast Cancer (ECIBC): European guidelines on breast cancer screening and diagnosis Evidence profile

<b>Healthcare question</b>	Should conventional staging exams vs. no staging exams be used for patients with clinical stage III breast cancer without symptoms suggestive of metastases?
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<b>Abbreviations</b>	<b>CI:</b> Confidence interval

Certainty assessment							Impact	Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Detection rate: Combined tests (prevalence)									
5 <sup>1,2,3,4,5</sup>	randomised trials	not serious <sub>a,b,c</sub>	not serious	serious <sup>d</sup>	not serious	none	Pooled detection rate: 142 per 1,000 examinations (95%CI 113 - 175); n/N = 74/510	⊕⊕⊕○ MODERATE	CRITICAL
False positive: Combined tests									
2 <sup>4,5</sup>	randomised trials	not serious <sub>a,b,e</sub>	not serious	serious <sup>d</sup>	not serious	none	Pooled false positive rate: 56 per 1,000 examinations (95%CI 33 - 84); n/N = 24/327	⊕⊕⊕○ MODERATE	CRITICAL

Certainty assessment							Impact	Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Detection rate: Bone Scan									
4 <sup>2,3,6,7</sup>	randomised trials	serious <sub>a,f</sub>	not serious	serious <sup>d</sup>	serious <sup>g</sup>	none	Pooled detection rate: 103 per 1,000 examinations (95%CI: 53 - 167); n/N = 103/1,172	⊕○○○ VERY LOW	CRITICAL
False positive: Bone Scan - not reported									
-	-	-	-	-	-	-		-	CRITICAL
Detection rate: CT Chest									
1 <sup>8</sup>	randomised trials	serious <sub>a,f</sub>	not serious	not serious	not serious	none	Pooled detection rate: 60 per 1,000 examinations (95%CI: 39 - 87); n/N = 25/417	⊕⊕⊕○ MODERATE	CRITICAL
False positive: CT Chest									
1 <sup>8</sup>	randomised trials	serious <sub>a,f</sub>	not serious	not serious	not serious	none	False positive: 141 per 1,000 examinations (95%CI 109 - 179); n/N = 59/417	⊕⊕⊕○ MODERATE	CRITICAL
Detection rate: CT pelvic - not reported									
-	-	-	-	-	-	-		-	CRITICAL
False positive: CT pelvic - not reported									
-	-	-	-	-	-	-		-	CRITICAL
Detection rate: CT abdominal - not reported									
-	-	-	-	-	-	-		-	CRITICAL
False positive: CT abdominal - not reported									
-	-	-	-	-	-	-		-	CRITICAL
Detection rate: XR Chest									
3 <sup>2,3,9</sup>	randomised trials	serious <sub>a,f</sub>	not serious	serious <sup>d</sup>	serious <sup>g</sup>	none	Pooled detection rate: 63 per 1,000 examinations (95% CI 16 - 131); n/N = 12/190	⊕○○○ VERY LOW	CRITICAL
False positive: XR Chest									
1 <sup>9</sup>	randomised trials	serious <sub>a,f</sub>	not serious	serious <sup>d</sup>	serious <sup>g</sup>	none	False positive: 60 per 1,000 examinations (95%CI 20 - 133); n/N = 5/84	⊕○○○ VERY LOW	CRITICAL
Detection rate: US									
1 <sup>2</sup>	randomised trials	serious <sub>a,f</sub>	not serious	not serious	serious <sup>g</sup>	none	Pooled detection rate: 57 per 1,000 examinations (95% CI: 12 - 157); n/N = 3/53	⊕⊕○○ LOW	CRITICAL
False positive: US - not reported									
-	-	-	-	-	-	-		-	CRITICAL

## Explanations

- Different reference standards were used, some included another imaging test without histological confirmation which is likely to incorrectly classify the condition.
- The proportion of patients actually staging investigated with more than one imaging tests was variable, which could underestimated the exams' performance. All studies reported to include follow-up of patients although with different time frame.

- c. Imaging for searching distant metastases is routine practice; therefore the risk of selected patient population undergoing staging is low also for retrospective studies.
- d. Some or most of the studies recruited consecutive patients from medical records (or prospectively) which could or could not have symptoms suggestive of metastases.
- e. Imaging for searching distant metastases is routine practice; therefore the risk of selected patient population undergoing staging is low also for retrospective studies.
- f. The assessment of each individual tests is based in the number of patients that were examined who are a subpopulation of all those subject at this stage which could overestimate its performance.
- g. Judgement of imprecision was considered serious as one or both of the confidence interval limits reached detection rates threshold, which could potentially change the decision about requesting staging tests.

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