



Surgery & Breast Cancer Mets

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Metastasectomy versus radiation of secondary sites in stage IV breast cancer: Analysis from a national cancer registry



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Metastasectomy versus radiation of secondary sites in stage IV breast cancer: Analysis from a national cancer registry

- ▶ October 2021
- ▶ Department of Hematology-Oncology, Cleveland Clinic Florida, USA
- ▶ Goal:
 - ▶ radiation vs. surgical resection of metastatic sites (metastasectomy) in patients with de novo stage IV breast cancer
- ▶ Methods:
 - ▶ National Cancer Database
 - ▶ Subgroups based on malignant site involvement:
 - ▶ 1. Bone only, 2. Brain only, 3. Liver only, 4. Lung only, and 5. Metastasis involving >1 site

Sample size:

- ▶ N = 22,749 patients
 - ▶ Radiation (81.2%)
 - ▶ Metastasectomy (28.8%)

Variable N (%)	LRT		Chi-square p-value	Multiple logistic regression	
	Radiation therapy N = 18,469 (81.2%)	Metastasectomy N = 4280 (18.2%)		OR (95% CI)	p-value
Metastatic site involvement					<.001
Bone	6057 (84.3)	1124 (15.7)	<.001	1	
Brain	490 (73.6)	176 (26.4)		1.9 (1.6–2.3)	<.001
Liver	100 (39.2)	155 (60.8)		7.8 (6.0–10.2)	<.001
Lung	87 (29.7)	206 (70.3)		12.9 (9.9–16.7)	<.001
More than 1 site	11,735 (81.8)	2619 (18.2)		1.2 (1.1–1.3)	<.001
Age					<.001
< 50	3635 (78.4)	1000 (21.6)	<.001	1	
50–70	10,507 (81.1)	2443 (18.9)		0.8 (0.7–0.9)	<.001
> 70	4327 (83.8)	837 (16.2)		0.7 (0.6–0.8)	<.001

Results and conclusion

- ▶ Metastasectomy was associated with better median overall survival across all 5 cohorts ($p < .001$), with the survival benefit being the most pronounced with lung only (OS: 56.9 months; HR 0.8, 95% CI 0.7-0.9, $p = .032$), or liver only (OS: 41.6 months; HR: 0.9; 95% CI: 0.7-1.1, $p < .001$) metastasis.
- ▶ **Metastasectomy** in patients with de novo stage IV breast cancer may be associated with **improved overall survival** as compared to radiation of secondary lesions, particularly in those with **only liver or lung involvement**.
- ▶ Prospective randomized controlled trials investigating surgical resection of metastatic sites in patients with breast cancer are warranted.

› J Surg Res. 2021 Aug 30;268:650-659. doi: 10.1016/j.jss.2021.07.032. Online ahead of print.

Impact of Hepatic Metastasectomy in the Multimodal Treatment of Metastatic Breast Cancer

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Impact of Hepatic Metastectomy in the Multimodal Treatment of Metastatic Breast Cancer, August 2021 J surg Research

- ▶ General Surgery Department, William Beaumont Army Medical Center, El Paso, Texas
- ▶ 2004-2015 National Cancer Database
- ▶ Of 2,895 patients, only 90 (3.1%) underwent hepatic resection
- ▶ Two groups:
 - ▶ younger (52 ± 12.7 versus 59.2 ± 14.6 ; $P < 0.001$)
 - ▶ have private insurance (74.4% versus 45.3%; $P < 0.001$).
 - ▶ prior surgery of the primary site (partial mastectomy/total mastectomy ($P < 0.001$))
 - ▶ More lobular carcinoma (OR 2.26; CI 1.06-4.82; $P = 0.03$)
- ▶ in this **select patient population**, **hepatic metastectomy** was associated with a **significant survival advantage** when included in the multimodal treatment of synchronous stage IV breast cancer.

> Ann Surg Oncol. 2021 Sep;28(9):5048-5057. doi: 10.1245/s10434-021-09621-8. Epub 2021 Feb 2.

The Effect of Primary Surgery in Patients with De Novo Stage IV Breast Cancer with Bone Metastasis Only (Protocol BOMET MF 14-01): A Multi-Center, Prospective Registry Study

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The Effect of Primary Surgery in Patients with De Novo Stage IV Breast Cancer with Bone Metastasis Only (Protocol BOMET MF 14-01): A Multi-Center, Prospective Registry Study

▶ Methods:

- ▶ prospective, multicenter registry study BOMET MF14-01, initiated in May 2014.
- ▶ BOM BC were divided into two groups:
 - ▶ systemic treatment (ST group)
 - ▶ LRT (LRT group)
 - ▶ ST after LRT (LRT + ST group)
 - ▶ ST before LRT (ST + LRT group).

Protocol BOMET MF 14-01-Results

- ▶ 505 patients
 - ▶ 240 (47.5%) patients in the ST group
 - ▶ 265 (52.5%) in the LRT group
 - ▶ 113 patients (26.3%) died in the 34-month
 - ▶ median follow-up, 85 (35.4%) in the ST group and 28 (10.5%) in LRT group
 - ▶ Local progression was observed in 39 (16.2%) of the patients in the ST group and 18 (6.7%) in the LRT group ($p = 0.001$).
 - ▶ Hazard of death was 60% lower in the LRT group compared with the ST group (HR 0.40, 95% CI 0.30-0.54, $p < 0.0001$).

Protocol BOMET MF 14-01- Conclusion

- ▶ LRT prolonged survival and decreased locoregional recurrence in the median 3-year follow-up.
- ▶ Timing of primary breast surgery either at diagnosis or after ST provided a survival benefit similar to ST alone in de novo stage IV BOM BC patients.