Role of Liver Resection in Selected Patients with Metastatic Breast Cancer: A Paradigm Shift Underway?

AUTHORS: Janelle-Cheri Millen MD[1], Alana Hofmann MD[1], Jose Wilson Mesquita-Neto MD[2], Jeffrey Rose MD[3], and Francis I. Macedo MD[3]

From the [1]Department of Surgery, Ocala Regional Medical Center, University of Central Florida College of Medicine, Ocala, FL [2]Department of Surgery, Wayne State University School of Medicine, Detroit, Michigan, [4]Department of Surgery, North Florida Regional Medical Center, University of Central Florida College of Medicine, Gainesville, FL

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BACKGROUND/SYNOPSIS: More effective chemotherapy regimens have enabled surgical resection of metastatic lesions in several cancer populations with improved overall survival (OS). The value of liver resection (LR) in breast cancer liver metastases (BCLM) is controversial while prognosis without surgery remains poor. We sought to investigate the role of LR in BCLM as a potential therapeutic option in patients with isolated liver metastasis.

METHODS: National Cancer Data Base (NCDB) was queried for patients with metastatic breast cancer to the liver diagnosed from 2010 to 2014. Kaplan-Meier and Cox proportional hazards regression analyses were performed to compare OS.

RESULTS: A total of 9,244 patients with BCLM were included in the analysis. Median age was 58 years (IQR 49-68 years). Of them, 2,632 (28.5%) patients had metastatic disease confined to the liver. There were 1,957 (78.2%) patients who received chemotherapy, 93 (3.5%) who underwent LR and 83 (3.2%) who received chemotherapy and LR. Chemotherapy combined with LR was superior to chemotherapy alone (69.7 vs 49.2 months, $p<0.001$) in patients with isolated BCLM. After controlling for patient and tumor variables, LR, chemotherapy and positive hormone receptor status were independent predictors of improved survival. Advanced age and comorbidity score negatively impacted OS.

CONCLUSIONS: This is the largest series thus far assessing the role of LR in patients with BCLM. LR plus chemotherapy may result in improved OS in selected BCLM compared with chemotherapy alone. LR should be considered in patients with BCLM who have good response to systemic therapy.