Abstract:

BACKGROUND: It is largely unknown to what extent new oncologic treatment options have improved survival of patients with brain metastasis in recent decades. Therefore, a multi-institutional time-staggered analysis was performed. METHODS: Two cohorts of 103 patients each were analyzed, one treated between 2005 and 2009 and the other between 1983 and 1989, ie, approximately 20 years earlier. Stratified analyses by prognostic groups were also performed (graded prognostic assessment [GPA] and Radiation Therapy Oncology Group recursive partitioning analysis [RTOG-RPA]).

RESULTS: Patterns of care have changed significantly. Contemporary patients received focal treatments such as stereotactic radiosurgery and surgical resection far more frequently. Furthermore, systemic treatment was used more often in contemporary patients, both before and after diagnosis of brain metastasis. Improved survival was observed in the contemporary cohort (P = .03). The 1-year survival rate increased from 15% (95% confidence interval [CI], 7%-25%) to 34% (95% CI, 25%-44%). However, this improvement was largely driven by patients with favorable prognostic features. More than 40% of the patients still belong to unfavorable prognostic groups with limited median survival and little improvement.

CONCLUSIONS: Contemporary patients were managed
on a much more individualized basis, requiring multidisciplinary case discussion and thorough assessment of prognostic features. Progress has been made, but the overall outcome needs to be improved further. Avoiding overtreatment in patients with poor prognosis is as important as aggressive treatment in patients who might survive for several years. Cancer 2011. © 2010 American Cancer Society.