

	Score		
	0	0.5	1.0
Age in years	>60	50-59	<50
Karnofsky performance status	<70	70-80	90-100
No. of CNS metastases	>3	2-3	1
Extracranial metastases	Present	-	None

Kano et al. analyzed 422 consecutive patients (1440 [brain metastases](#)) who underwent [Gamma Knife radiosurgery](#) (SRS). The median total brain [tumor volume](#) was 4.7 cm<sup>3</sup> (range 0.3-69.3 cm<sup>3</sup>), and the median number of metastases was 2 (range 1-32). One hundred thirty-two patients underwent [whole brain radiation therapy](#). Survival times were compared using [recursive partitioning analysis](#) (RPA), the [Score Index for Radiosurgery](#) (SIR), the [Basic Score for Brain Metastases](#) (BSBM), and the [Diagnosis Specific Graded Prognostic Assessment](#) (DS-GPA).

The overall survival times after SRS were compared. With the RPA index, survival times were 2.6 months (Class III, n = 27), 5.5 months (Class II, n = 348), and 13.0 months (Class I, n = 47). With the DS-GPA index, survival times were 2.8 months (Scores 0-1, n = 67), 4.2 months (Scores 1.5-2.0, n = 143), 6.6 months (Scores 2.5-3.0, n = 111), and 9.4 months (Scores 3.5-4.0, n = 101). With the SIR, survival times were 3.2 months (Scores 0-3, n = 56), 5.8 months (Scores 4-7, n = 319), and 12.7 months (Scores 8-10, n = 47). With the BSBM index, survival times were 2.6 months (BSBM0, n = 47), 5.4 months (BSBM1, n = 282), 11.0 months (BSBM2, n = 86), and 8.8 months (BSBM3, n = 7). The DS-GPA index was the most balanced by case numbers in each class and provided the overall best prognostic index for overall survival.

The DS-GPA index proved most balanced and predictive of survival for patients with melanoma who underwent SRS as part of management for brain metastases. Patients whose DS-GPA score was  $\geq 2.5$  had predictably improved survival times after SRS <sup>1)</sup>.

<sup>1)</sup>

Kano H, Morales-Restrepo A, Iyer A, Weiner GM, Mousavi SH, Kirkwood JM, Tarhini AA, Flickinger JC, Lunsford LD. Comparison of prognostic indices in patients who undergo melanoma brain metastasis radiosurgery. J Neurosurg. 2018 Jan;128(1):14-22. doi: 10.3171/2016.9.JNS161011. Epub 2017 Jan 20. PubMed PMID: 28106495.

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