"A Single Institutional Experience on Whole Brain Radiotherapy as Primary Treatment for Brain Metastasis: A Retrospective Analysis of Patient Demographics, Prognostic Indices and Treatment-related Outcomes"

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INTRODUCTION

OBJECTIVES

To determine the baseline information regarding

- ✓ Patient Demographics and Tumor-Related Factors
- ✓ Prognostic Model Indexes (Recursive Partitioning Analysis and Graded Prognostic Assessment)
- ✓ Radiotherapeutic Dosing and Fractionation
- ✓ Correlation with the Median Survival for patients treated with Whole-Brain Radiotherapy in a low-middle income country (LMIC) like the Philippines.

METHODS

Retrospective Chart Review
June 2012 – October 2017

Inclusion Criteria

Age > 18 years old
Male/Female
Histology of primary tumor, Any
Histology of brain metastasis, Not required

Exclusion Criteria

Prior surgical treatment for brain metastasis
Prior radiosurgery for brain metastasis

→ **86** evaluable patients

RESULTS

SEX

♂ - 36%
♀ - 64%

AGE

≤ 40 y/o	21%
41-60 y/o	59%
> 60 y/o	20%

RECURSIVE PARTITIONING ANALYSIS (RPA)

PEARSON CORRELATION

	RPA	Median Survival
RPA	1	
Median Survival	-0.1097	1

GRADED PROGNOSTIC ASSESSMENT SCORE (GPA)

PEARSON CORRELATION

	GPA	Median Survival
GPA	1	
Median Survival	0.6936	1

SYMPTOMATOLOGY

headache	39%	hemiplegia	6%
vomiting	11%	Behavioral changes	5%
seizure	11%	dyspnea	5%
dizziness	9%	CN deficits	5%

LOCATION OF BRAIN METASTASIS

TUMOR PRIMARY SITE

RADIOTHERAPEUTIC DOSING AND FRACTIONATION

PROGNOSTIC INDICES

	Median Survival (p-Value)	
RPA score	0.829	Non-Significant
GPA score	0.020	Significant

CONCLUSIONS

- ✓ WBRT has been a primary management for brain metastasis in LMIC like the Philippines.
- ✓ Different prognostic factors affect the median survival (MS) of these patients. In this study, MS was **positively correlated** with a patient with female gender, breast as the primary site, high GPA score, large brain lesions, early start of WBRT and an RT dose of 30 Gy.
- ✓ MS was **negatively correlated** with high RPA scores, more than 1 extracranial metastasis, presence of brainstem lesion, more than 1 brain lesion and >100 days waiting time from brain metastasis detection to WBRT.
- ✓ Among the evaluated factors, only the **GPA score** is **significantly correlated with median survival**. A trend of poorer survival was noted for patients with brainstem lesions
- ✓ Goals of treatment focus more on palliation and improvement of quality of life.

REFERENCES

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