



2025

**KARNATAKA RADIOLOGY EDUCATION PROGRAM**



# RING ENHANCING LESION IN THE BRAIN - INFECTIOUS OR NEOPLASTIC PROCESS?

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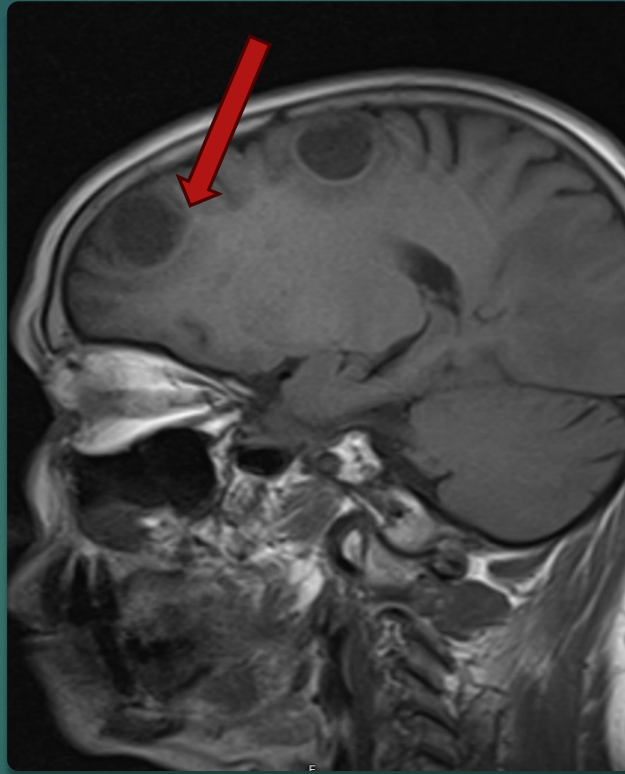
## CLINICAL DETAILS

- Female patient aged 60yrs came with complaint of headache since 3 months.
- Vomiting and fever since 3 days.
- Patient gives history of lump in the right breast for which she got operated in November 2023
- On HPE showed positive for invasive malignant breast carcinoma.(STAGE IV T4bN2cM1).



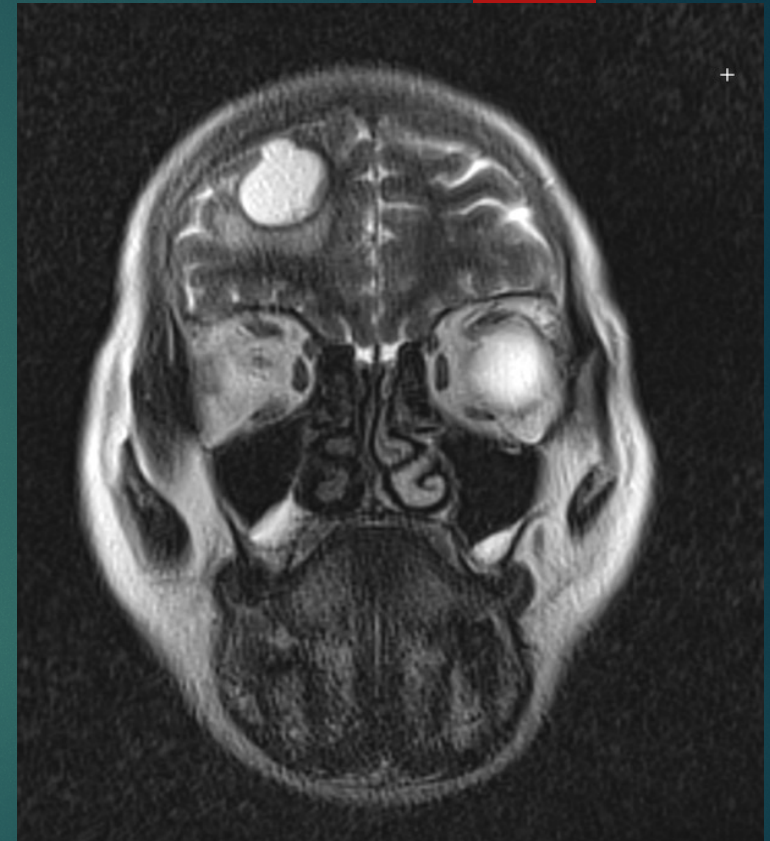
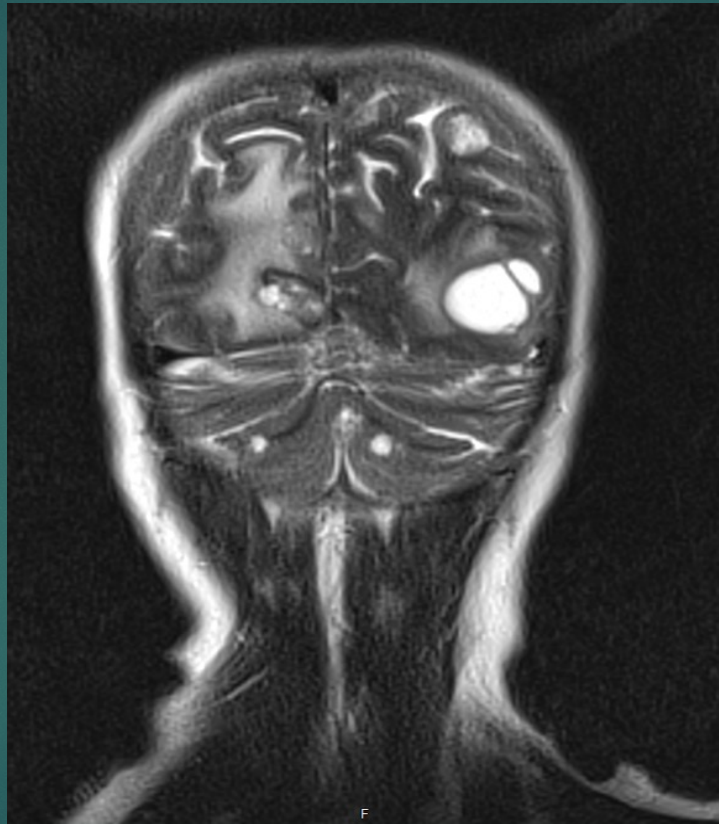
## MRI FINDINGS

- T1 sagittal section shows evidence of well defined hypointense lesion noted in the frontal and occipital region



## MRI FINDINGS

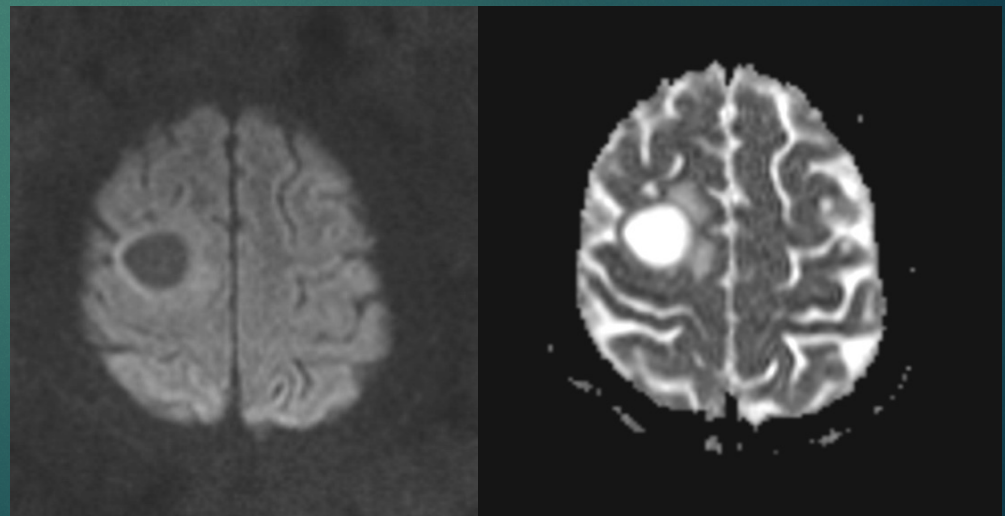
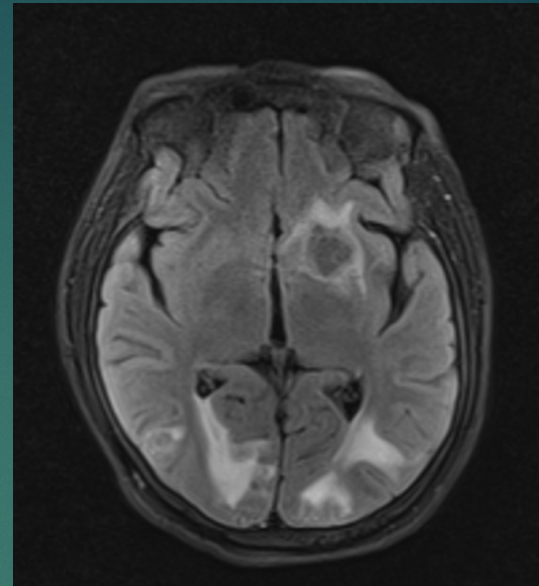
- ▶ T2 coronal section shows evidence of well defined T2 hyperintense lesion in the right frontal region





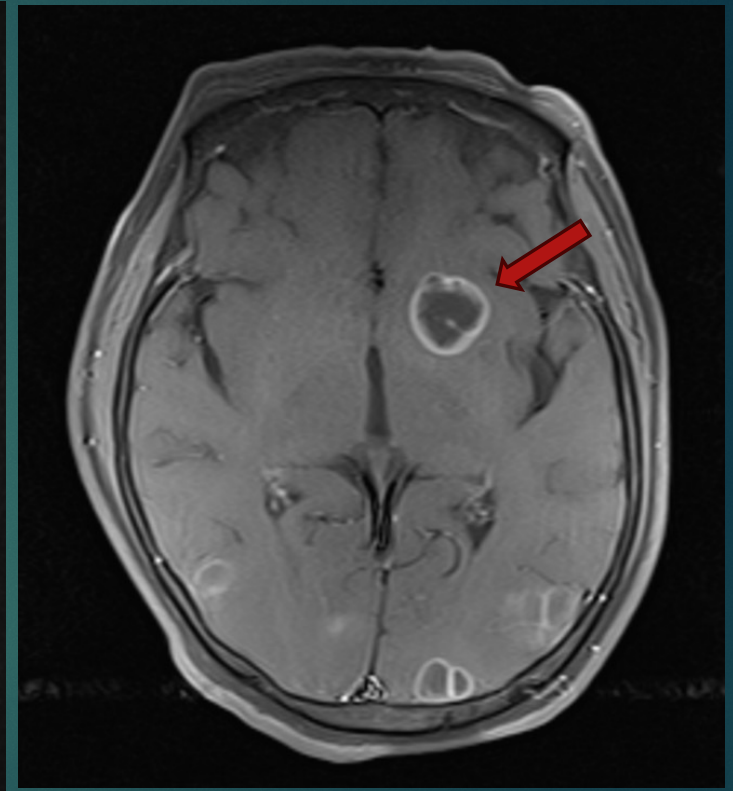
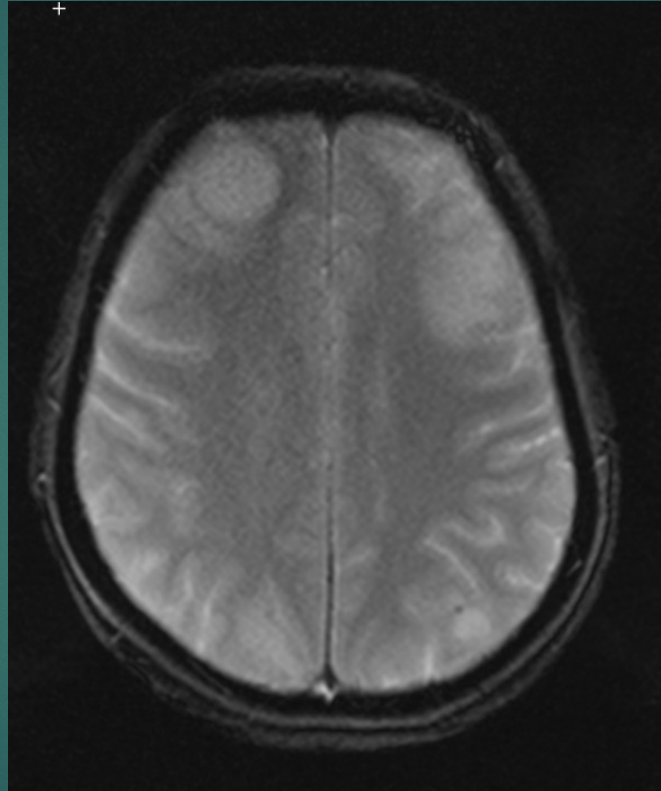
## MRI FINDINGS

- ▶ Flair axial section shows there is an Incomplete suppression on Flair and vasogenic edema .
- ▶ DWI axial section shows there Very thin subtle peripheral dr is seen with corresponding signal drop on ADC



## MRI FINDINGS

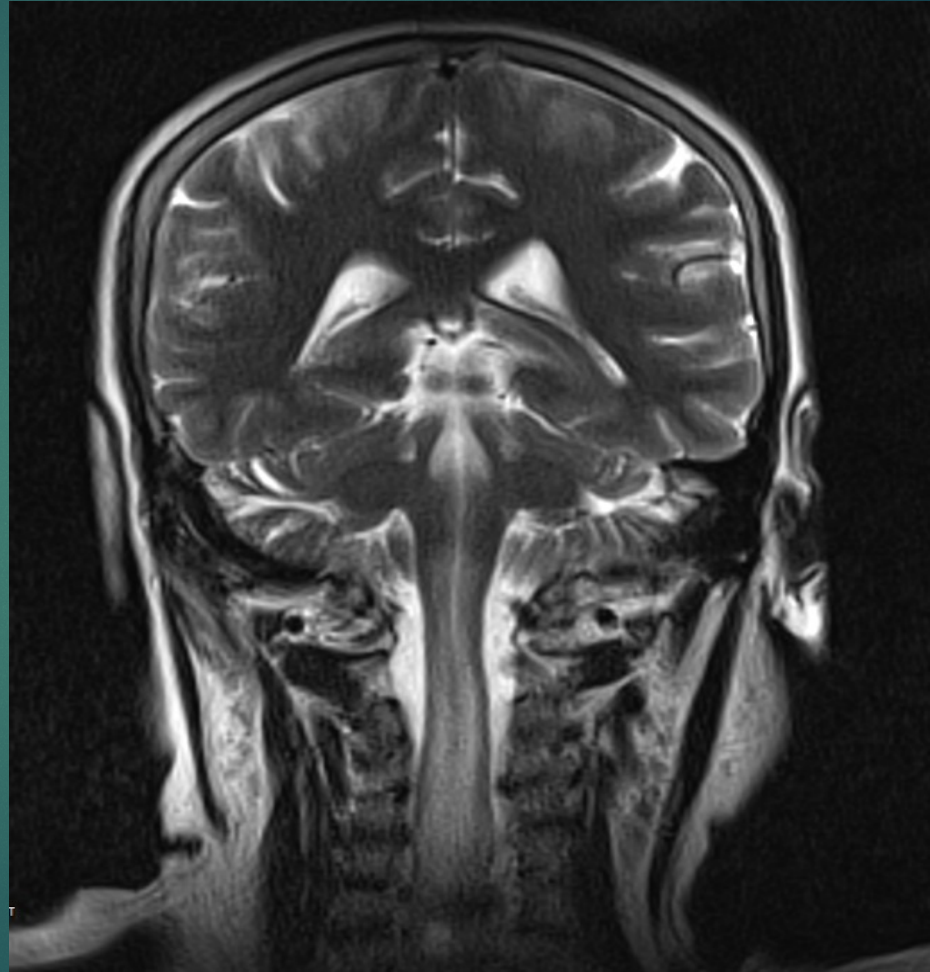
- ▶ SWI axial scan shows there's no blooming
- ▶ On post contrast study the lesion shows ring enhancing pattern (arrow)





## MRI FINDINGS

- ▶ Spinal cord appears bulky and showing altered signal intensity





## DIFFERENTIAL DIAGNOSIS:

- ▶ BRAIN CYSTIC METASTASIS.
- ▶ BRAIN ABSCESS.
- ▶ TUBERCULOMA.
- ▶ NEUROCYSTICERCOSIS.



## DISCUSSION

- ▶ In view of above history and considering all the imaging features ,differential diagnosis can be narrowed down to ,

### “ CYSTIC CEREBRAL METASTASIS”

#### POINTS FAVOURING

- Multifocal lesion
- Grey-white matter junction
- History of breast lump
- Significant perilesional vasogenic edema
- Peripheral rim of diffusion restriction



**THANK YOU!**