

# 神経放射線ワークショップ2014

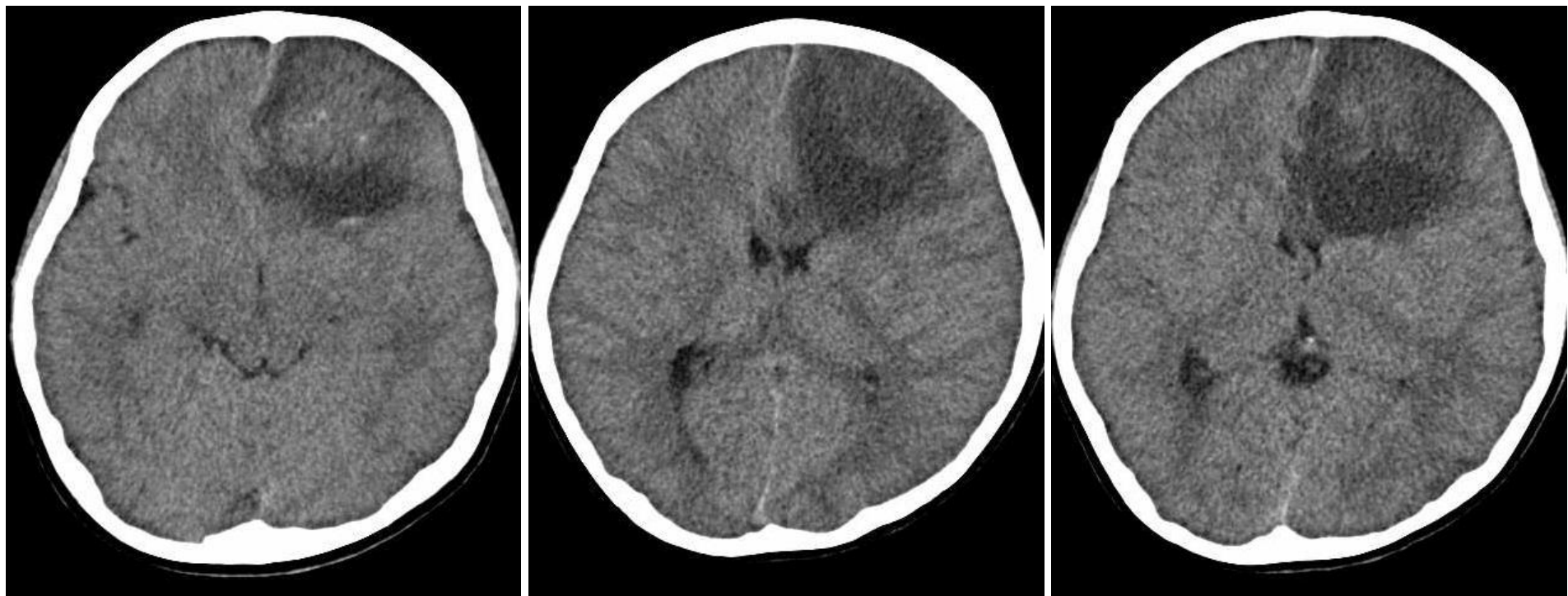
聖マリアンナ医科大学

鈴木 卓也

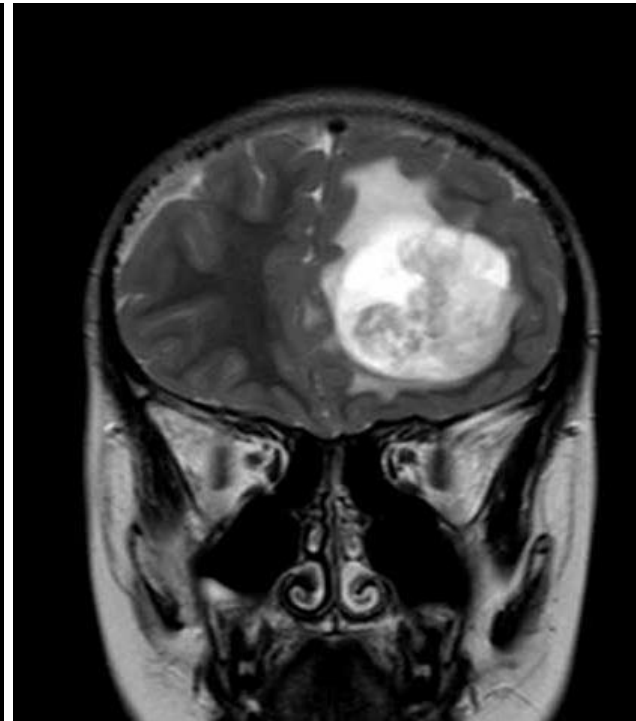
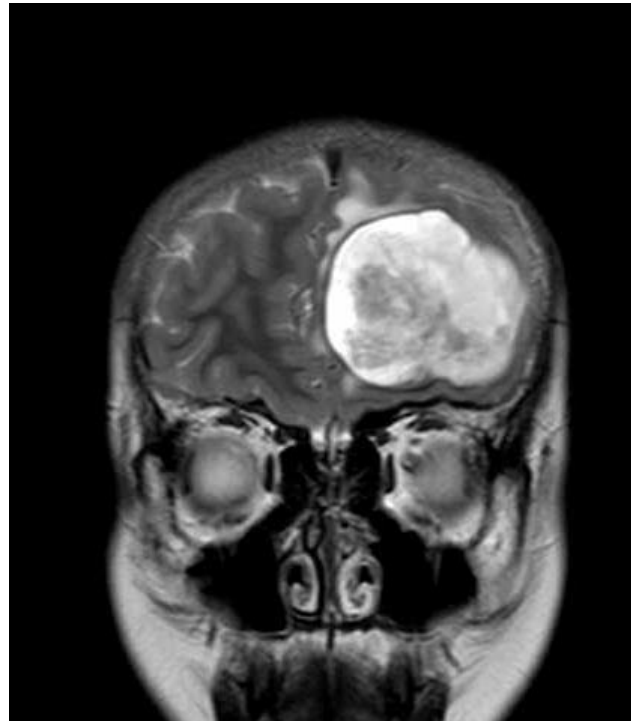
# case report

A -11 -year old boy came to our hospital complaining headache and nausea, which had been continued for a month. He had been excellent health before the above symptoms. He had no family history.

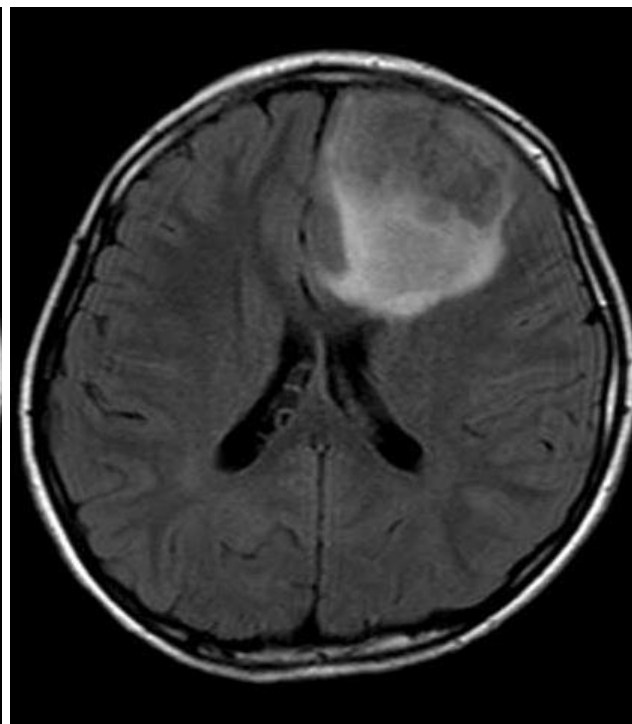
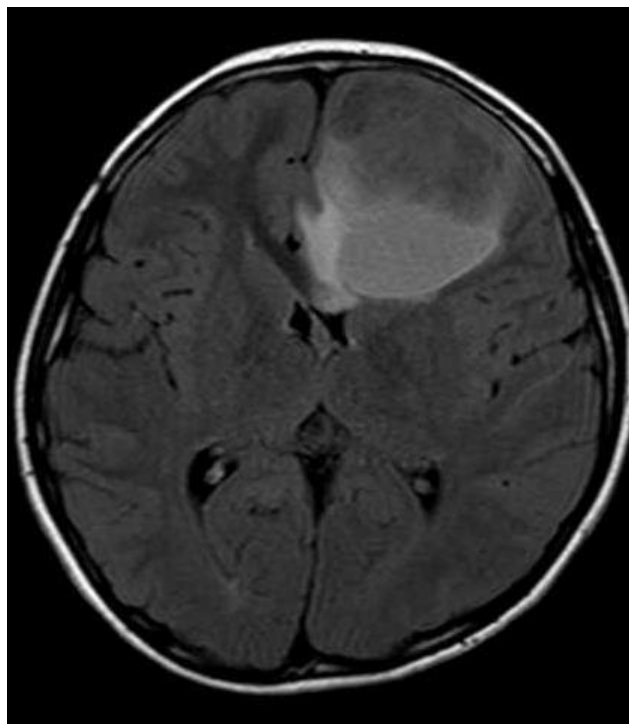
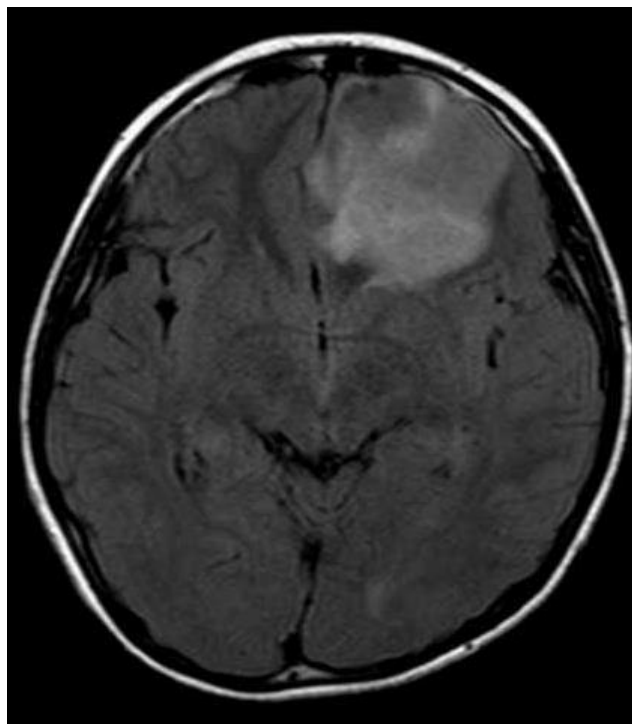
CT



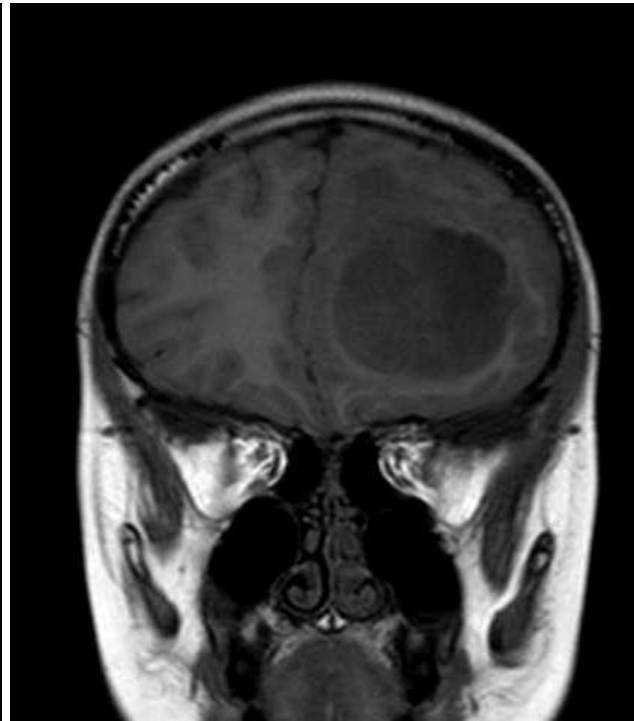
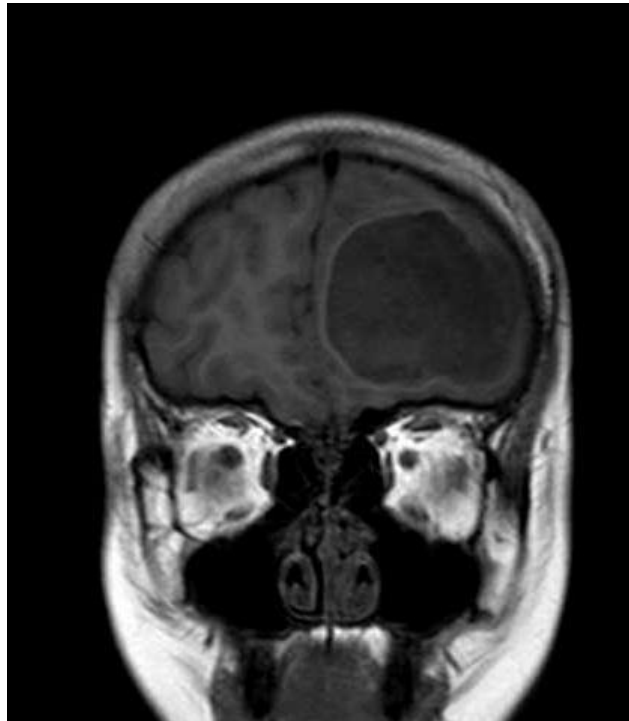
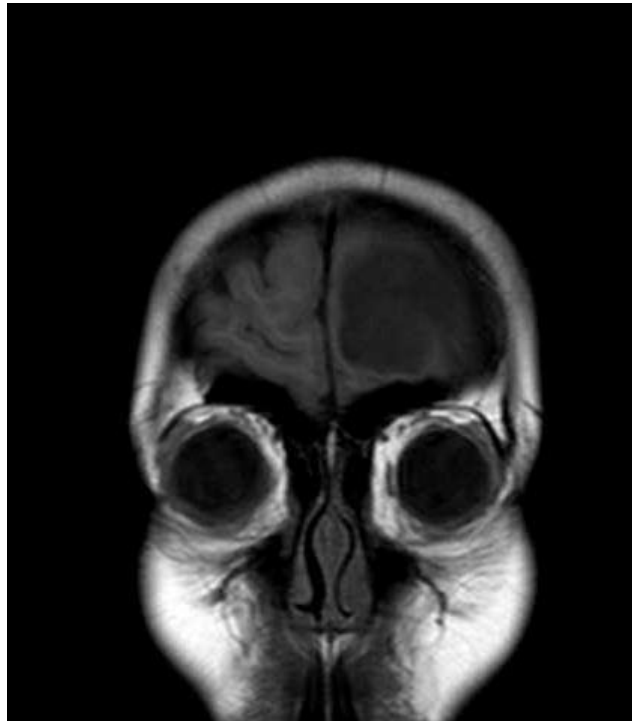
# T2WI



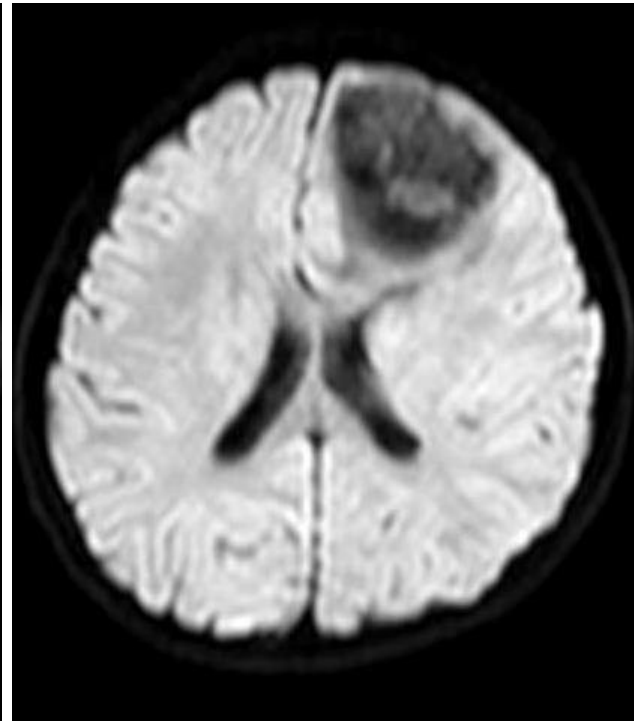
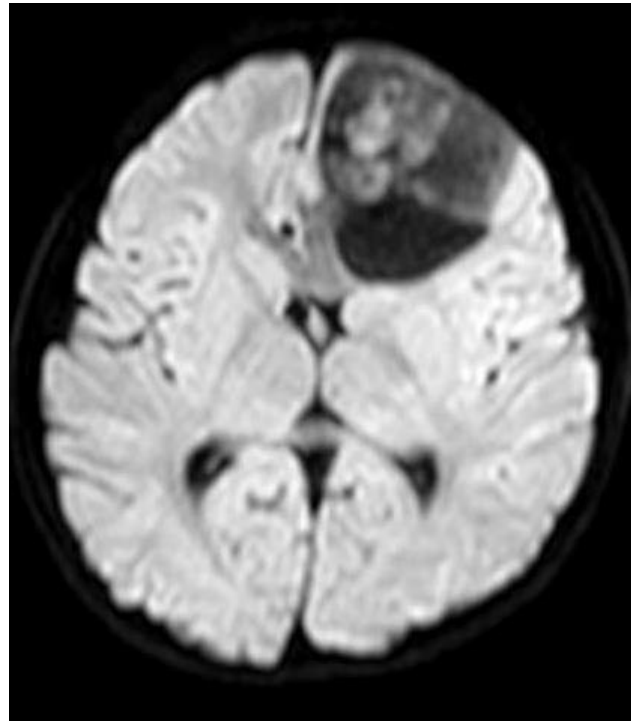
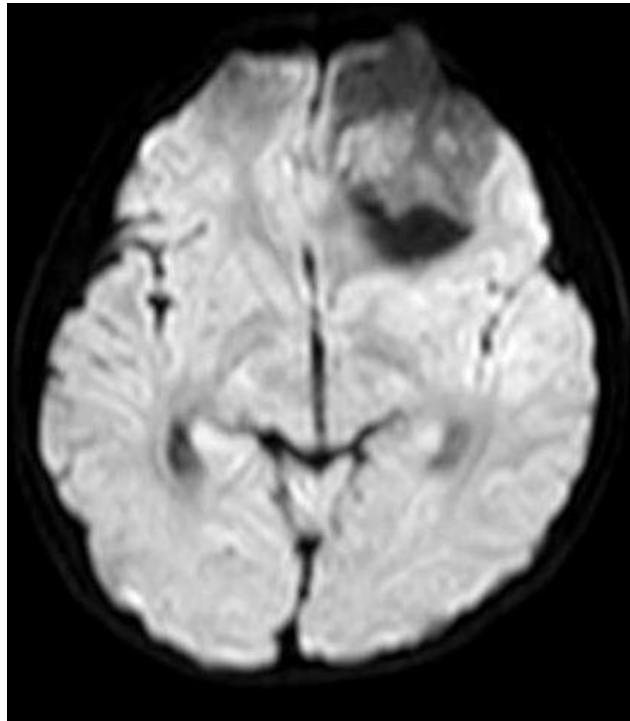
# FLAIR

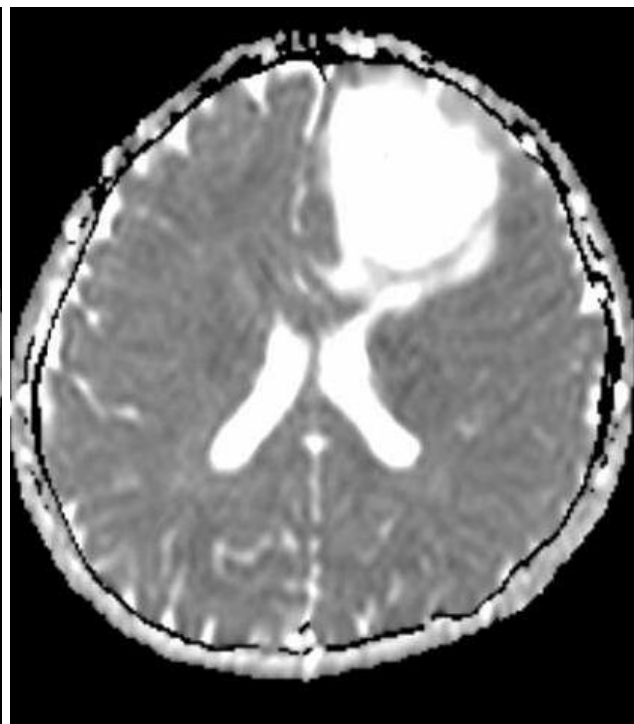
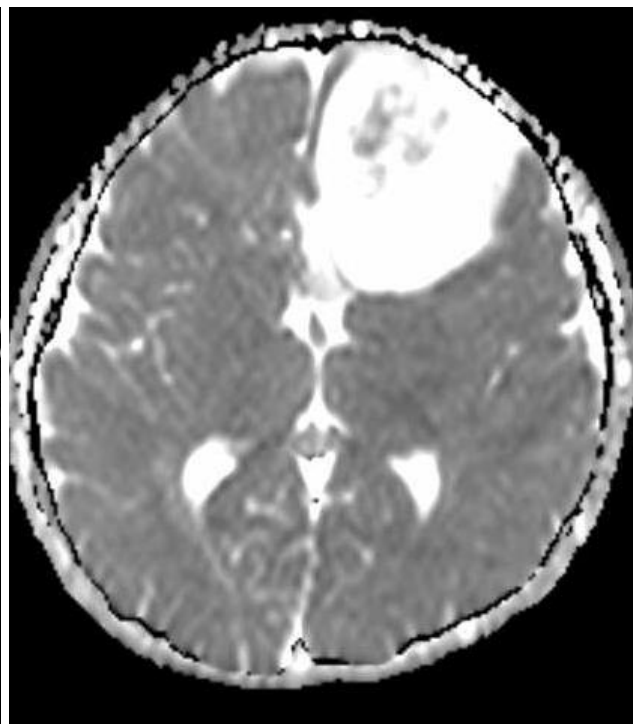
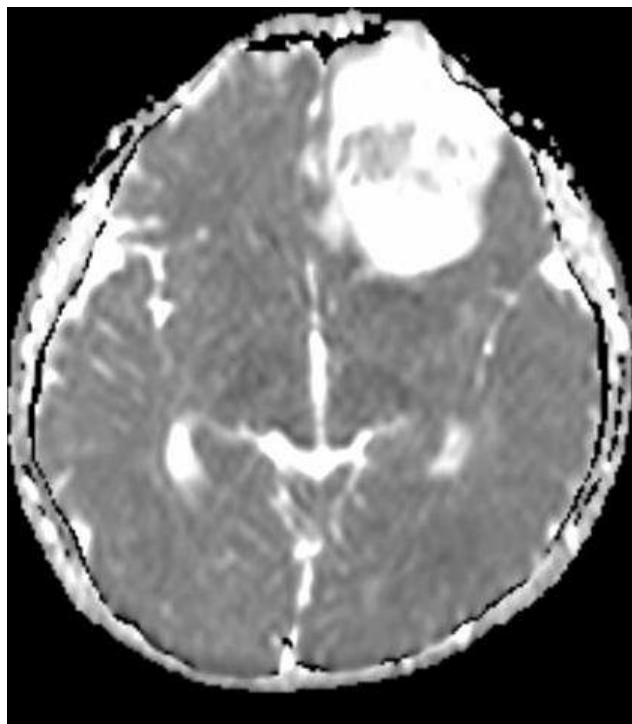


# T1WI

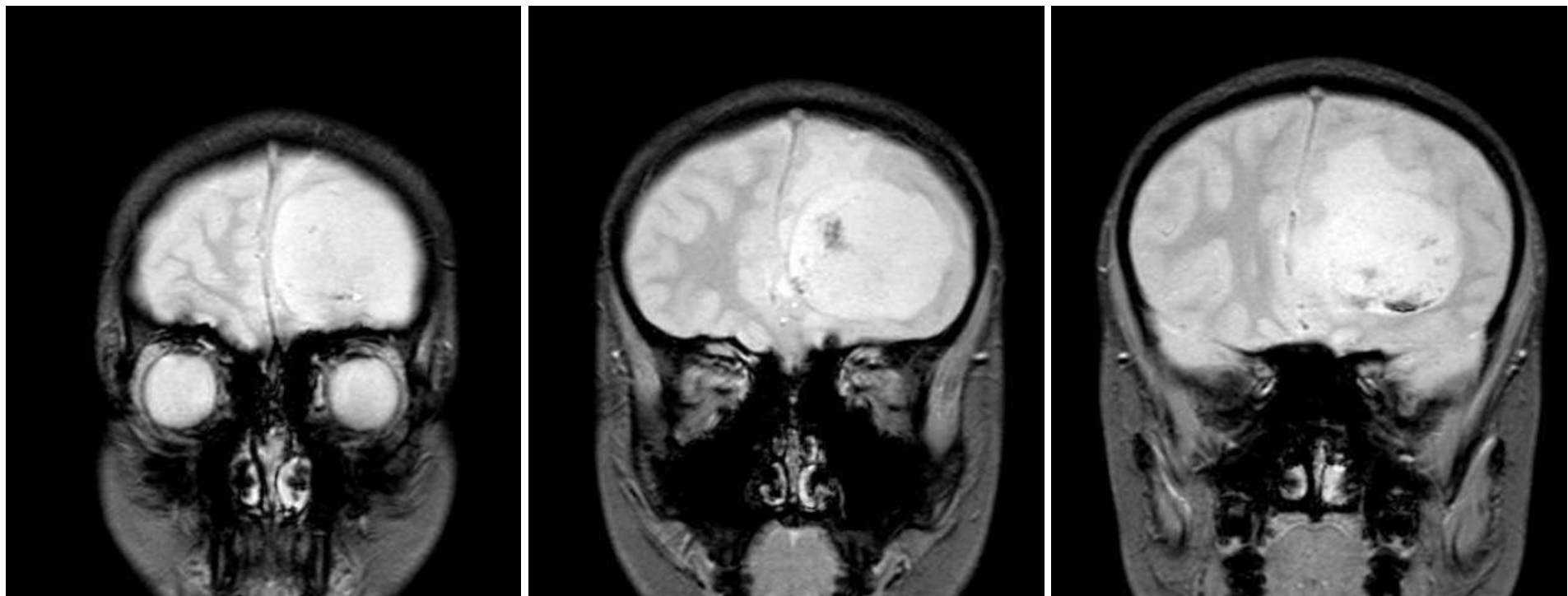


# DWI

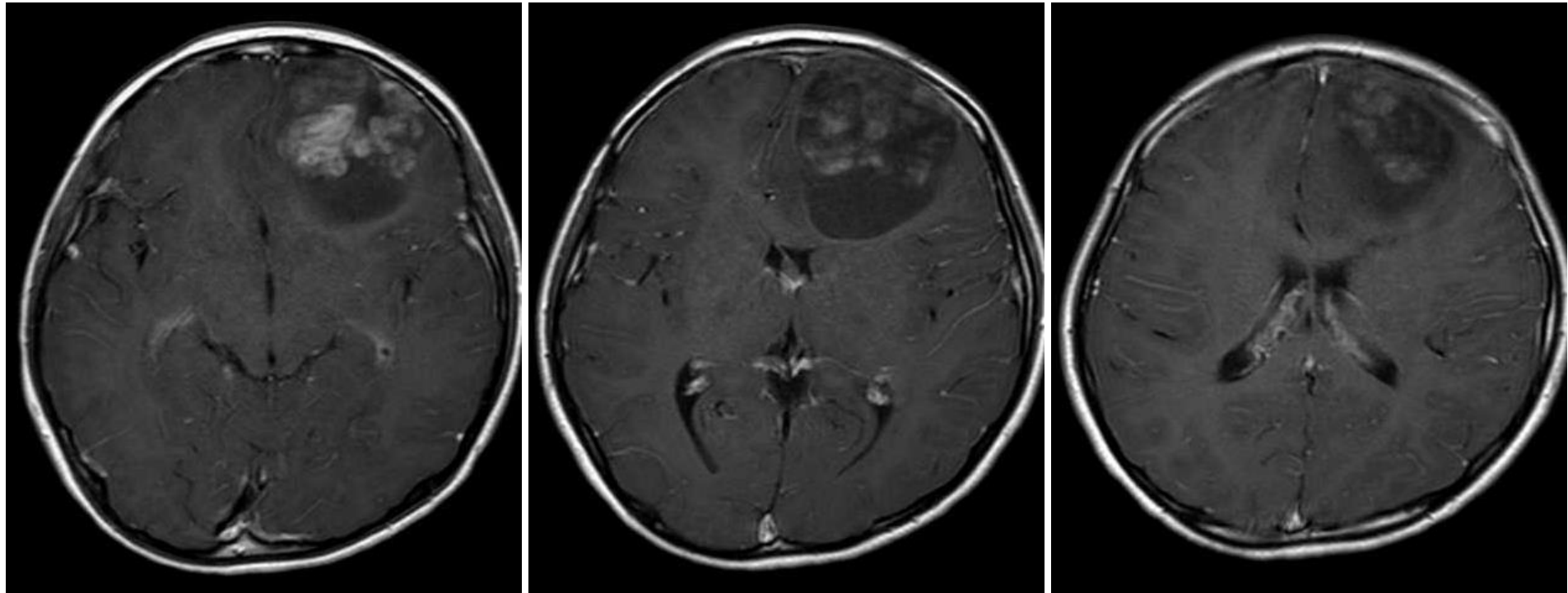




# T2\*WI



# Post-Gd T1WI



Diagnosis Please

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# Summary of image findings

- Large solid and cystic mass in left frontal lobe.
- Solid component shows heterogeneous enhancement and diffusion restriction.
- Include calcification
- Mild white matter edema around tumor

# Differential diagnosis before surgical treatment

- Pilocytic astrocytoma
- Pleomorphic xanthoastrocytoma
- PNET
- DIG / DIA
- (anaplastic) ependymoma
- other Glioma  
(incl. glioblastoma, oligodendroglioma)

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# Surgical findings

- Tumor shows well-defined margin
- Cystic tumor with solid component
- Success of total removal
- Mild bleeding

平戸先生病理診断をお願い致します。

AT / RT

( atypical teratoid / rhabdoid tumor )

# AT / RT

Age : < 3 years (mean 2 years)

more than 90% under 5 years

Sex : male  $\geq$  female

Epidemiology :

up to 20% primitive CNS tumors in children  
younger than 3

Location

supratentorial  $\geq$  infratentorial

# Our patient

Age : **11 years** < 3 years (mean 2 years)

more than 90% under 5 years

Sex : **male**  $\geq$  female

Location

**supratentorial**  $\geq$  infratentorial

# AT / RT

## Imaging features

CT : hyperattenuating mass  
may contain Ca<sup>++</sup>

DWI / ADC map: may restrict because of cellularity

T1WI / T2WI : heterogeneous because of  
hemorrhage and cysts  
relatively little edema for size of tumor

T1WI C+ : heterogeneous enhancement

DDx: PNET-MB, DIG/DIA, PXA  
Pilocytic astrocytoma, other Glioma,  
Ependymoma and so on ,

# AT / RT

WHO grade IV

Leptomeningeal spread common ( > 20% )

Natural History & Prognosis

Median survival =

16 months with leptomeningeal disease, 149 months without

Death rate = 64%

Treatment

Aggressive resection and chemoradiation have increased survival times

Radiation has shown to increase survival times

Chemotherapy regimens designed for PNET-MB largely ineffectual