

# Temozolomide treatment in pituitary tumor causing Cushing's Disease resistant to conventional therapy — Case report



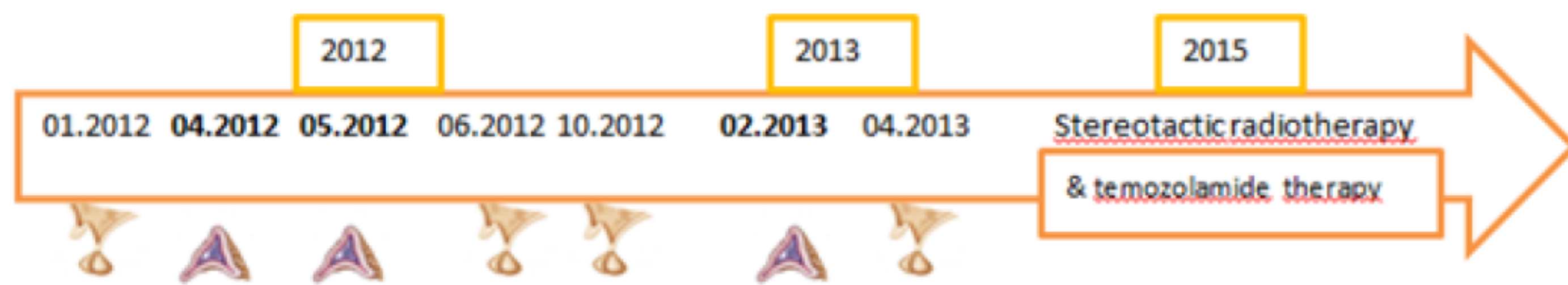
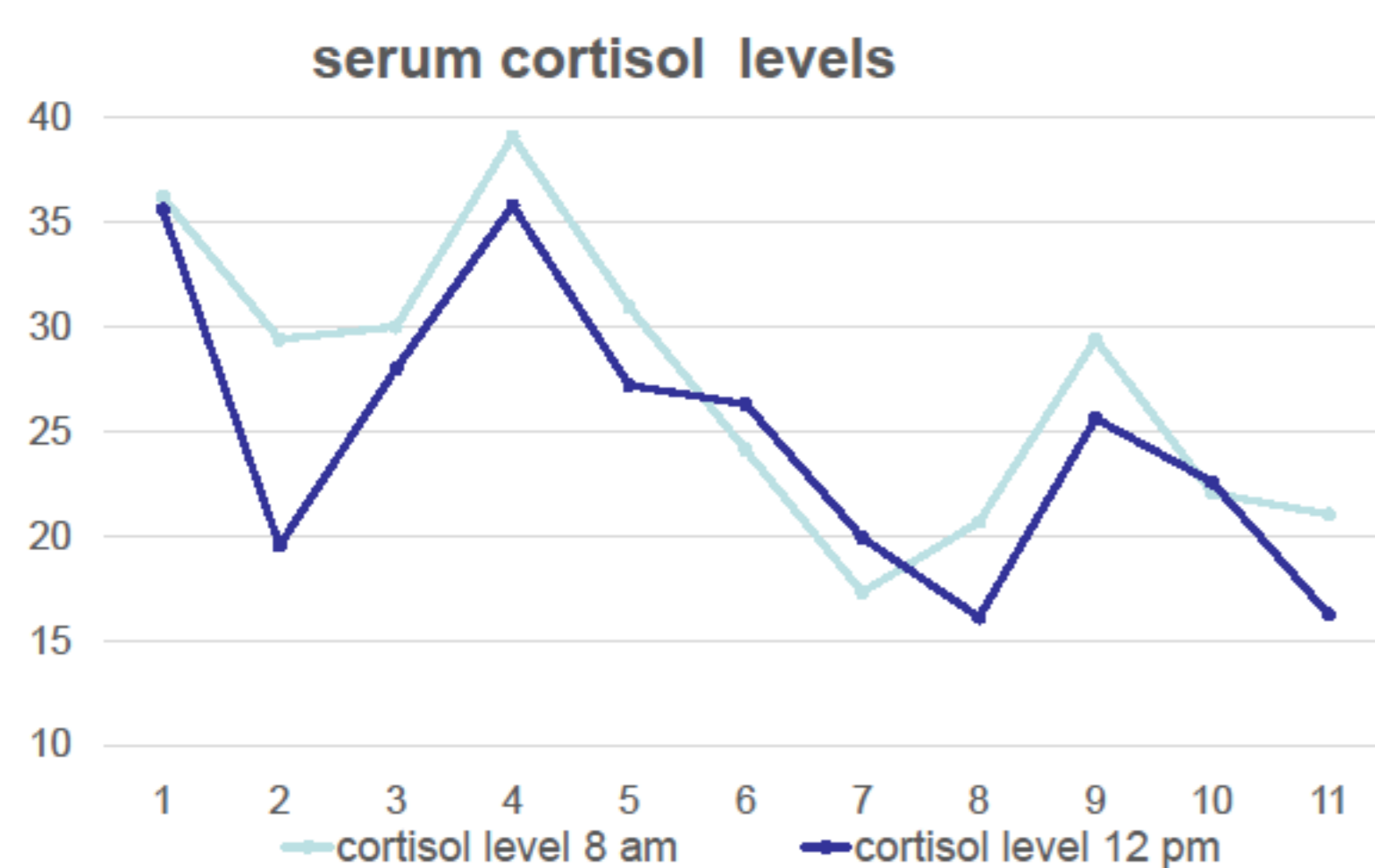
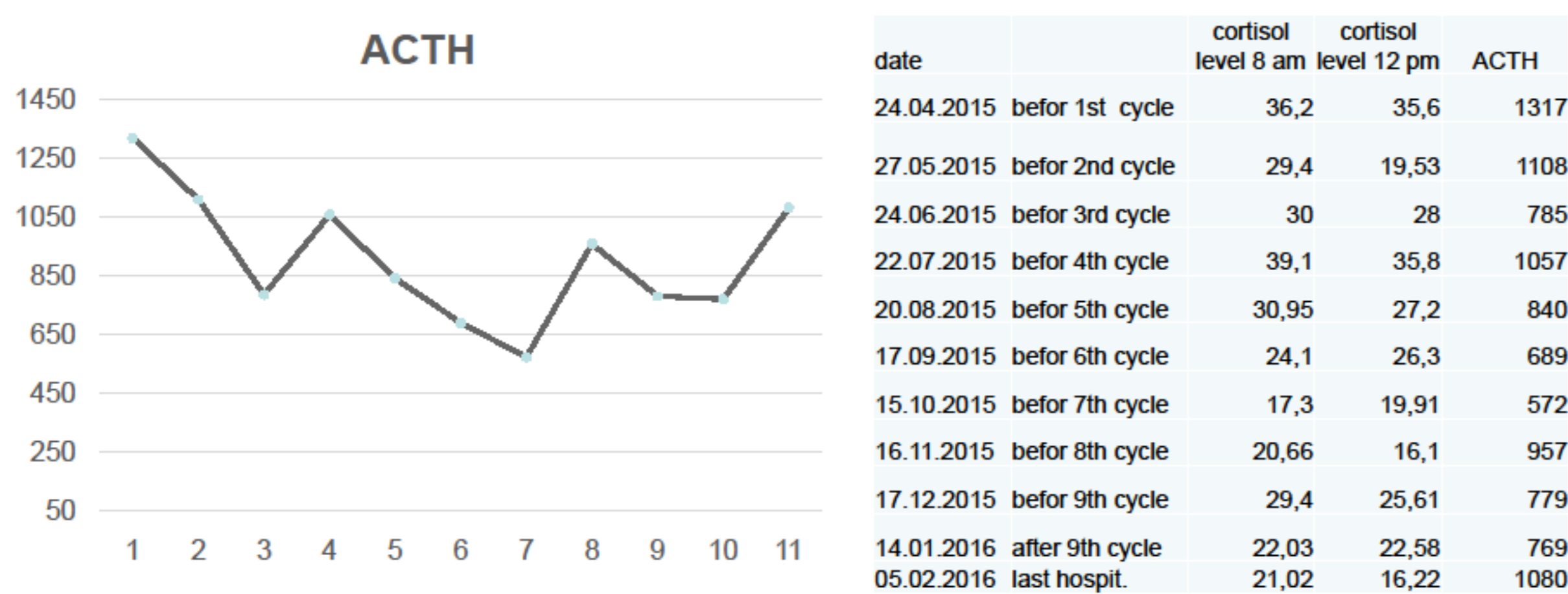
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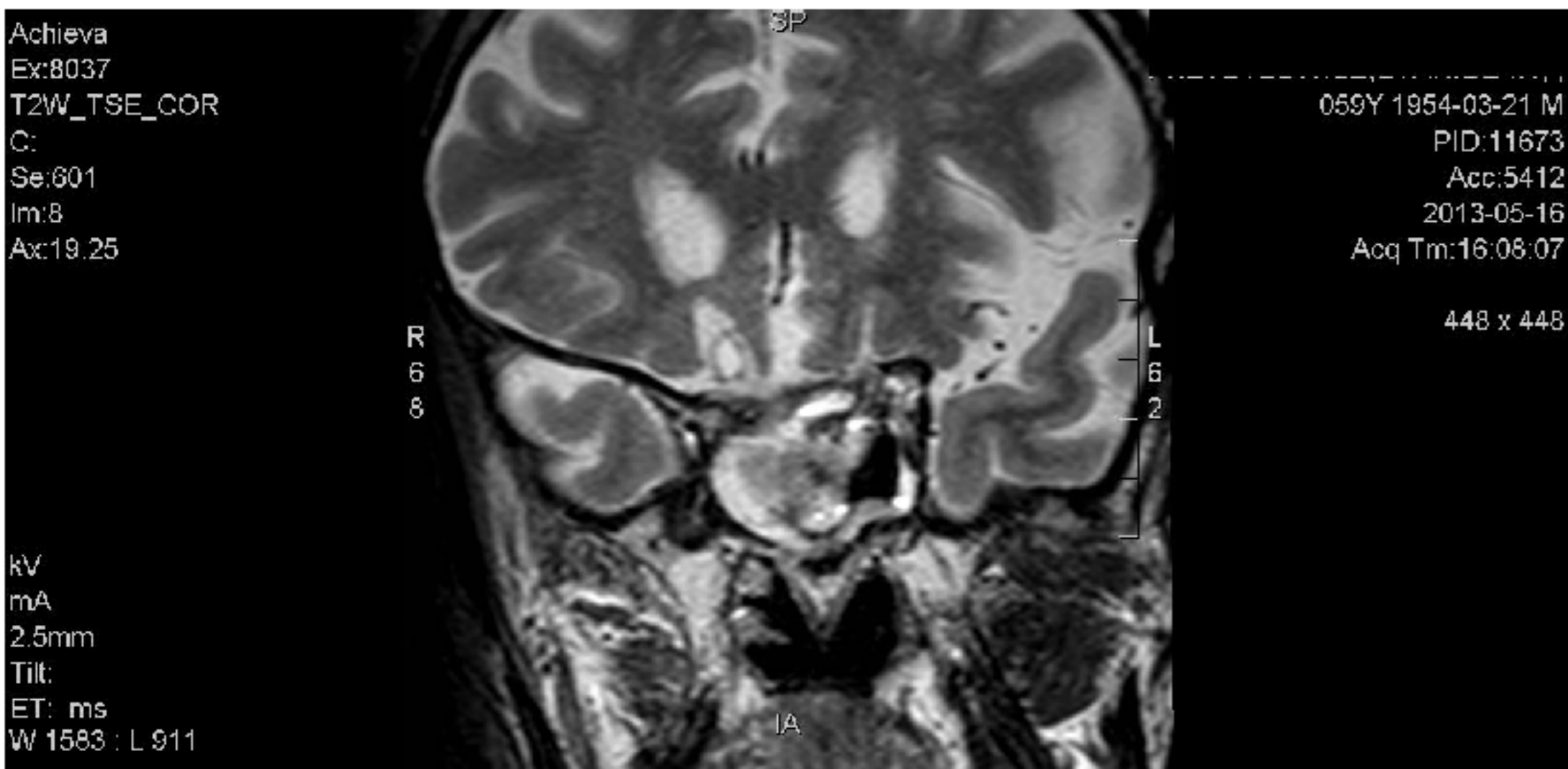
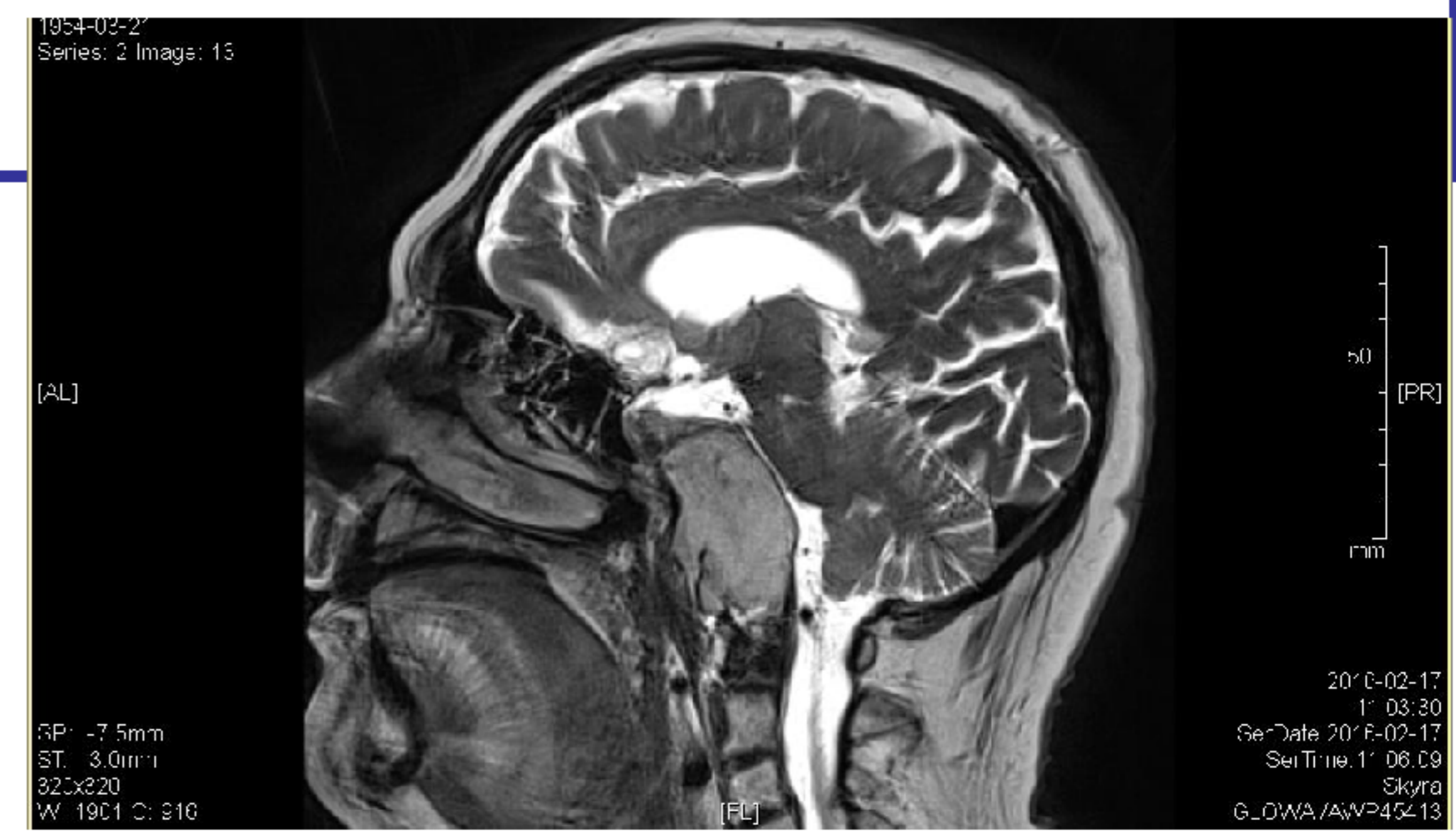
## OBJECTIVES

The management of pituitary tumors causing Cushing's Disease are a multidisciplinary challenge to clinicians with neurosurgery as a first line treatment followed by the radiotherapy and pharmacotherapy including chemotherapy. Such tumors are difficult to treat with high rate of recurrence. To date only 25 patients with Cushing Disease treated with the new alkylating agent temozolomide (TMZ) have been reported.

## GRAPHS AND TABLES



Procedure	Date
1st transphenoidal non radical neurosurgery	05.01.2012
Non radical left adrenalectomy	27.04.2012
Right adrenalectomy	21.05.2012
2nd transphenoidal non radical neurosurgery	19.06.2012
3rd transphenoidal non radical neurosurgery	08.10.2012
Left adrenalectomy	28.02.2013
4th transphenoidal non radical neurosurgery	19.04.2013
Stereotactic radiotherapy	08.2013
Stereotactic radiotherapy	04.2015
9 cycles of temozolomide therapy	04-12.2015



## CONCLUSIONS

The treatment with TMZ was effective and safe during first 6 cycles with progression observed during the continuation of the treatment. Further studies on the effectiveness of TMZ and other agents should be continued in patients with corticotrophin tumors resistant to conventional therapy.

## CASE PRESENTATION

Temozolomide (TMZ) is an alkylating chemotherapeutic agent that has recently been used in some cases as a new therapeutic tool for pituitary aggressive adenomas. In this report, we present the case of TMZ treatment in a 61 year old male patient who was diagnosed as Cushing's Disease in the course of pituitary macroadenoma in 2011. Patient underwent four transphenoidal non radical neurosurgeries (2012,2013) with rapid tumor progression, with postsurgical insufficiency of gonadal and thyroid axis, repeated non radical bilateral adrenalectomy (2012, 2013) and stereotactic radiotherapy and gamma knife surgery (2013, 2015). Histopathological examination revealed macroadenoma with high cell polymorphism and presence of the Crooke's cells. Patient has been treated with 600 mg of ketokonazol. From 2015 treated with 6 cycles of temozolomide with important clinical improvement with the 23-25% decrease of morning and midnight cortisol and the decrease of ACTH from 1317 to 689 pg/ml. In the control MRI the size of the tumor was the same as in the previous examination MRI-(30x35x35 mm). There were not side effects of TMZ. After oncological consultation the decision to continue TMZ treatment was undertaken. After the 9th cycle of TMZ in XII 2015 in the PET examination there was an increase in the size of the tumor to 35x53x54 mm. ACTH increased to 779 pg/ml, with morning and midnight cortisol increase. The clinical status and sight deterioration and hearing loss were observed. In February 2016 patient died due to sudden deterioration of the clinical status.

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