ILROG Mini-Atlas: Orbital location

63-year-old female with history of chronic dry eye presents with right ptosis and diplopia.

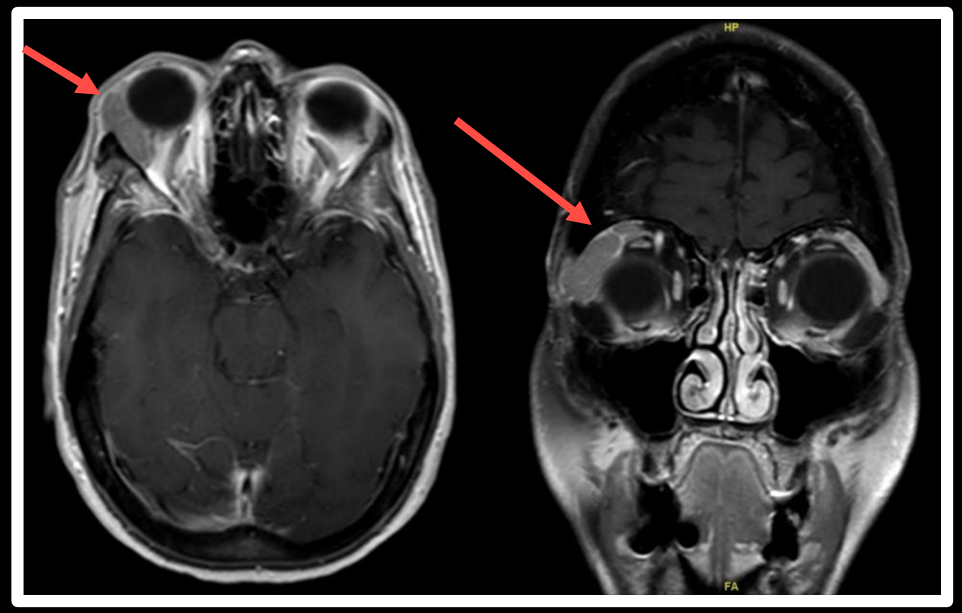
MRI revealed right lacrimal gland enlargement with associated exophthalmos (figure with red arrows).

Biopsy showed extra-nodal marginal zone lymphoma.

PET-CT showing enlarged, FDG-avid right lacrimal gland (blue arrow, SUV of 4.6).

Patient dispositioned to be treated with 400 cGy.

Note the low radiation dose choice is based on recently emerging data demonstrating that ultra low radiation dose is highly effective.



[1]Yahalom et al; IJROBP. 2015 May 1;92(1):11-31
[2]Fosala et al; IJROBP Volume 86 Number 5 2013
[3]Pinnix et al; Head Neck. 2018 Jun;40(6):1335

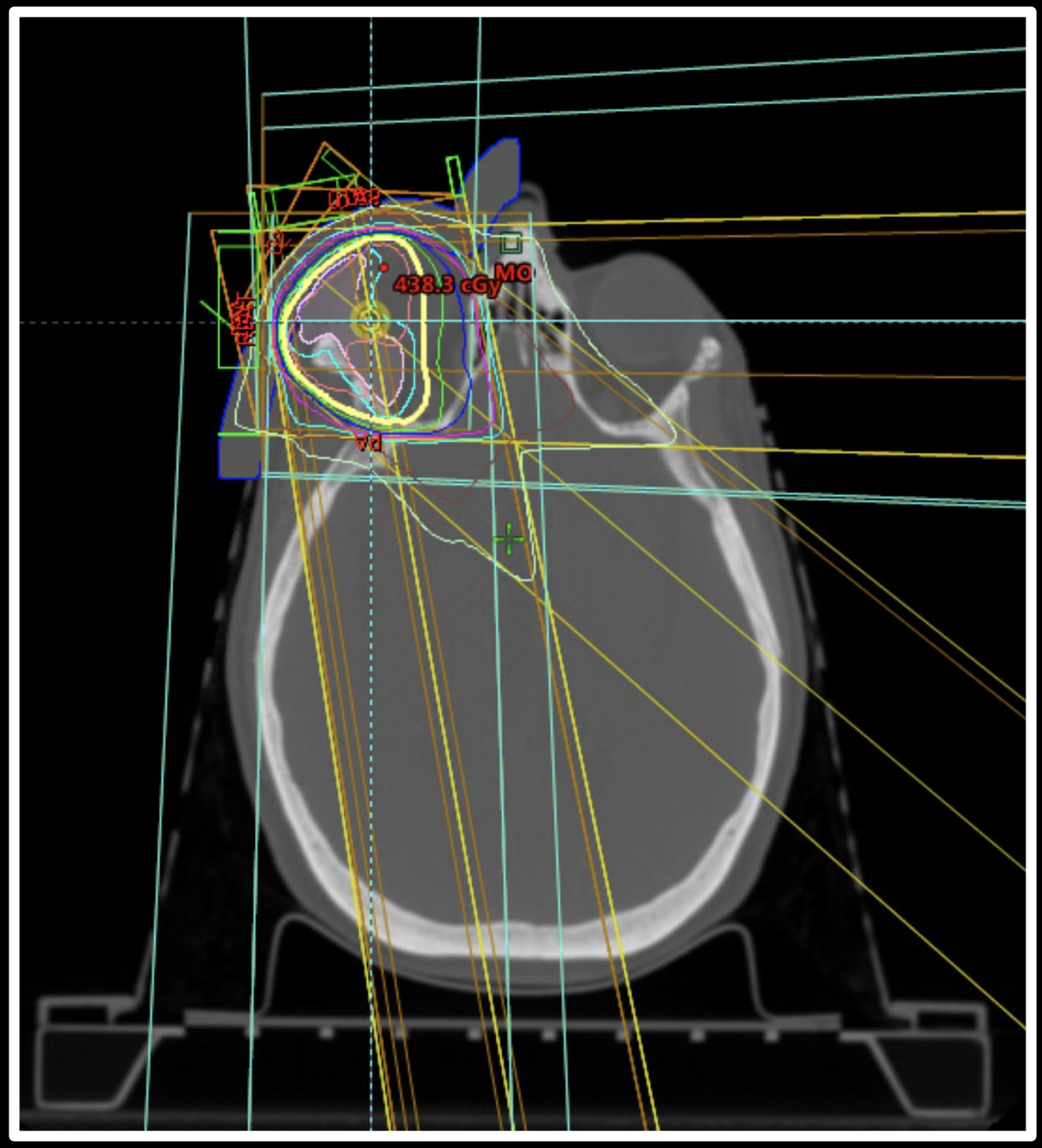
Planning CT on left panel and fused MRI on right panel for reference. CTV contours (pink) are demonstrated on the axial images. The contralateral left lens is also contoured in blue.

CTV contours (Pink) and PTV (Blue), which is CTV plus 3 mm, shown on the coronal image.

Treating the whole orbit is also acceptable.

Technique: 3D- conformal therapy 3-field technique that included a lightly weighted R lateral field because of the depth of right lacrimal mass

1 cm bolus was added at the time of planning



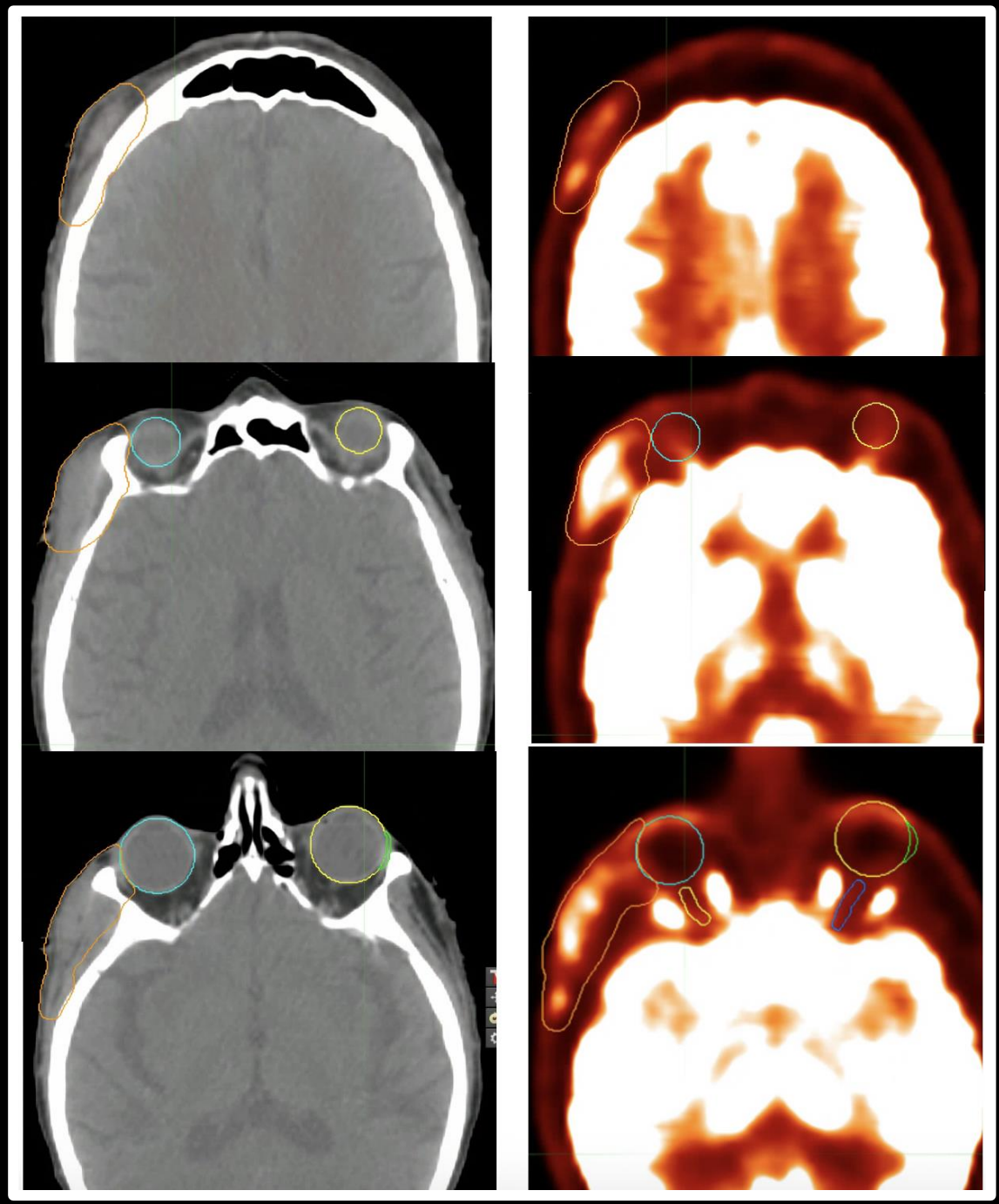
74-year-old male presents with progressive right temporal swelling and right eye pressure.

MRI showed an enhancing mass involving the right lateral orbit and right temporal region.

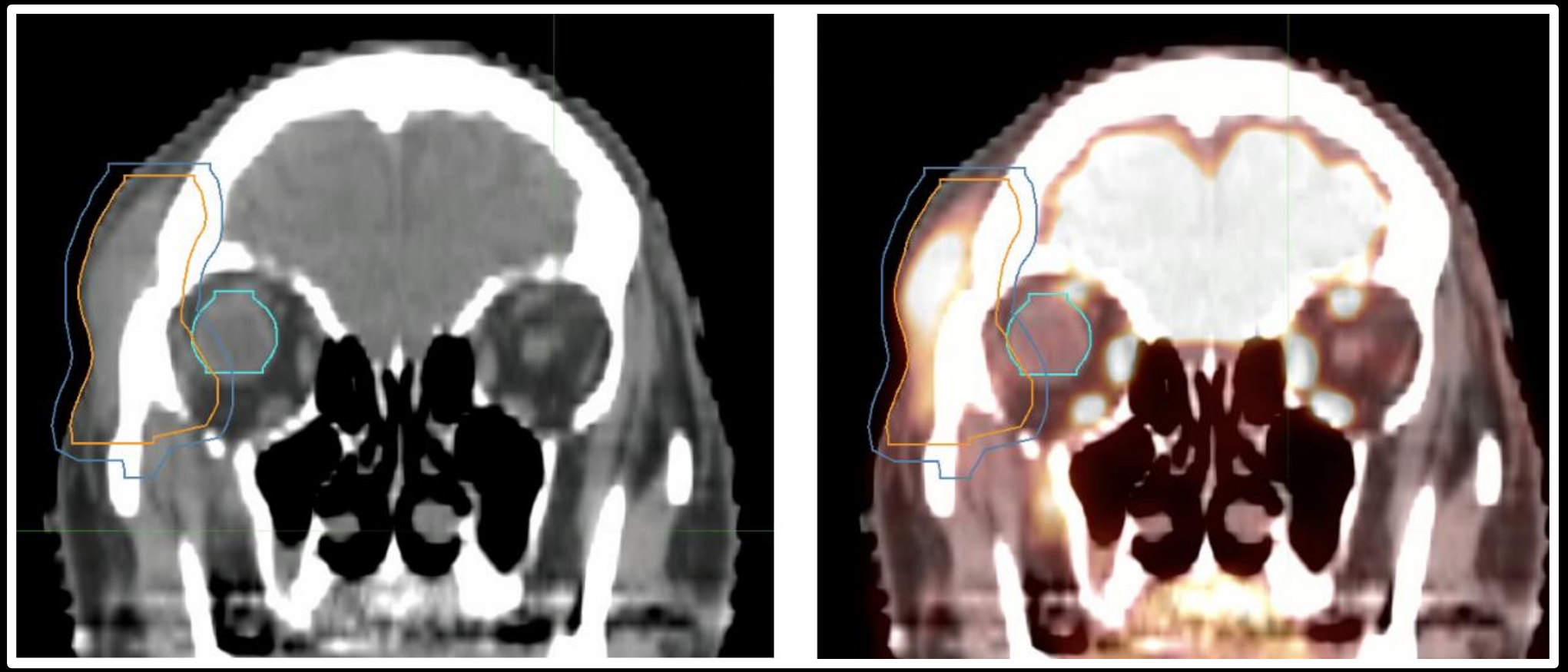
Biopsy showed extra-nodal MZL.

Staging PET-CT showed an FDG-avid soft tissue density lesion along the lateral right orbital wall with FDG-avid skin/subcutaneous involvement in the right temporal region

Planning CT on left panel and PET on right panel for reference. CTV (Orange) contours shown on the axial images.

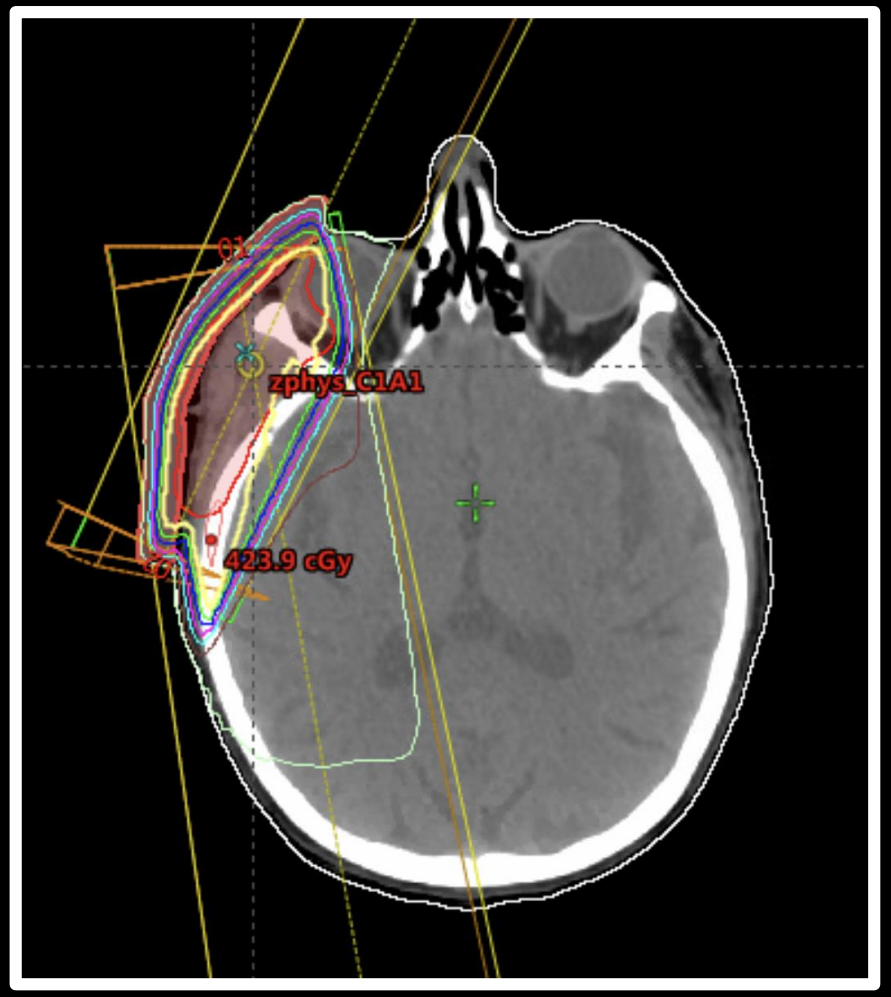


CTV (Orange) contours and PTV (Blue) shown on the coronal image. The right eye is contoured as an avoidance structure (Cyan).



Technique: 3D- conformal therapy with wide oblique fields conforming to the relatively superficial planning target volume, with 1 cm bolus added at planning.

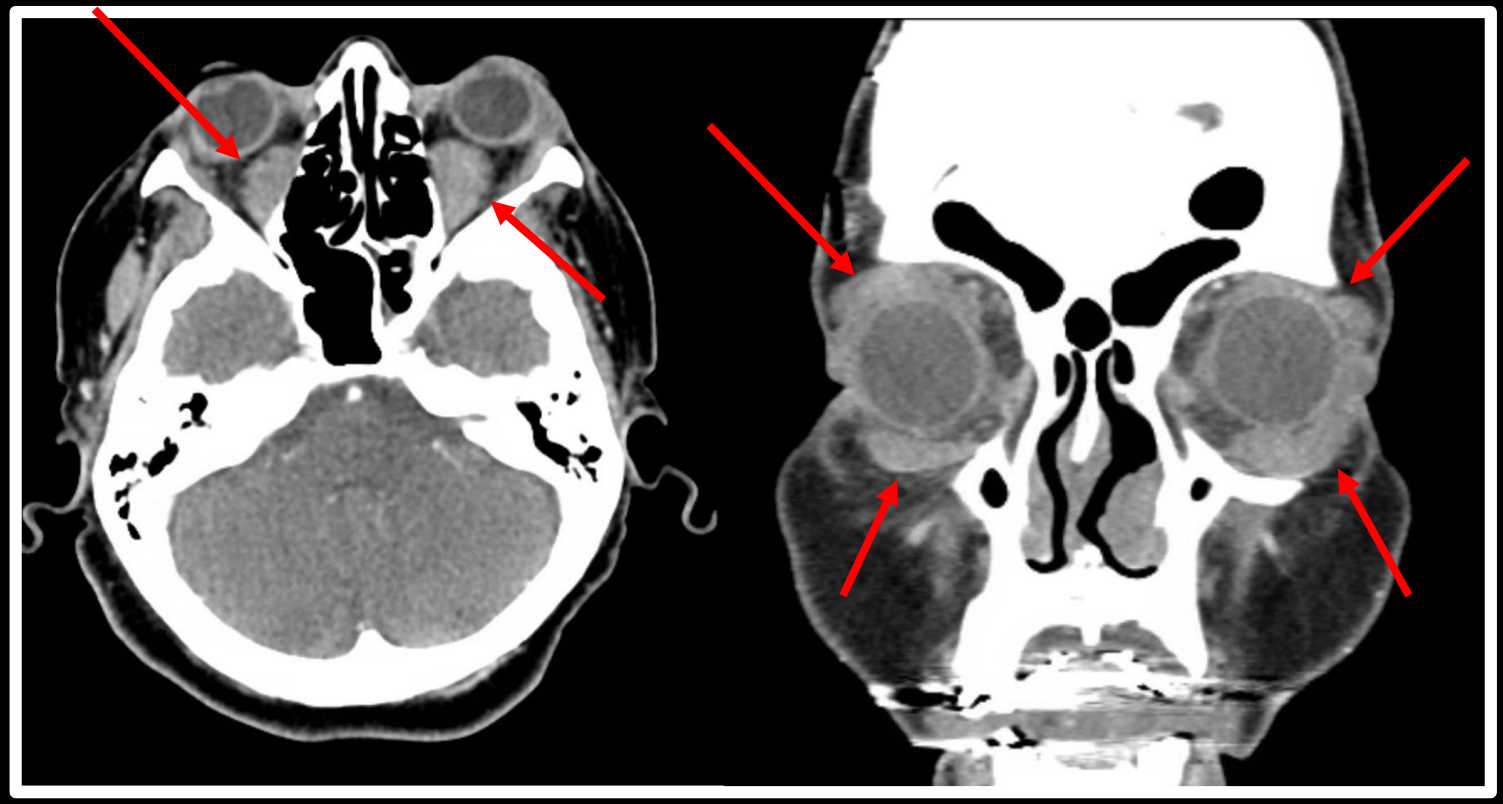
The planned treatment was to 400 cGy in 2 fractions.

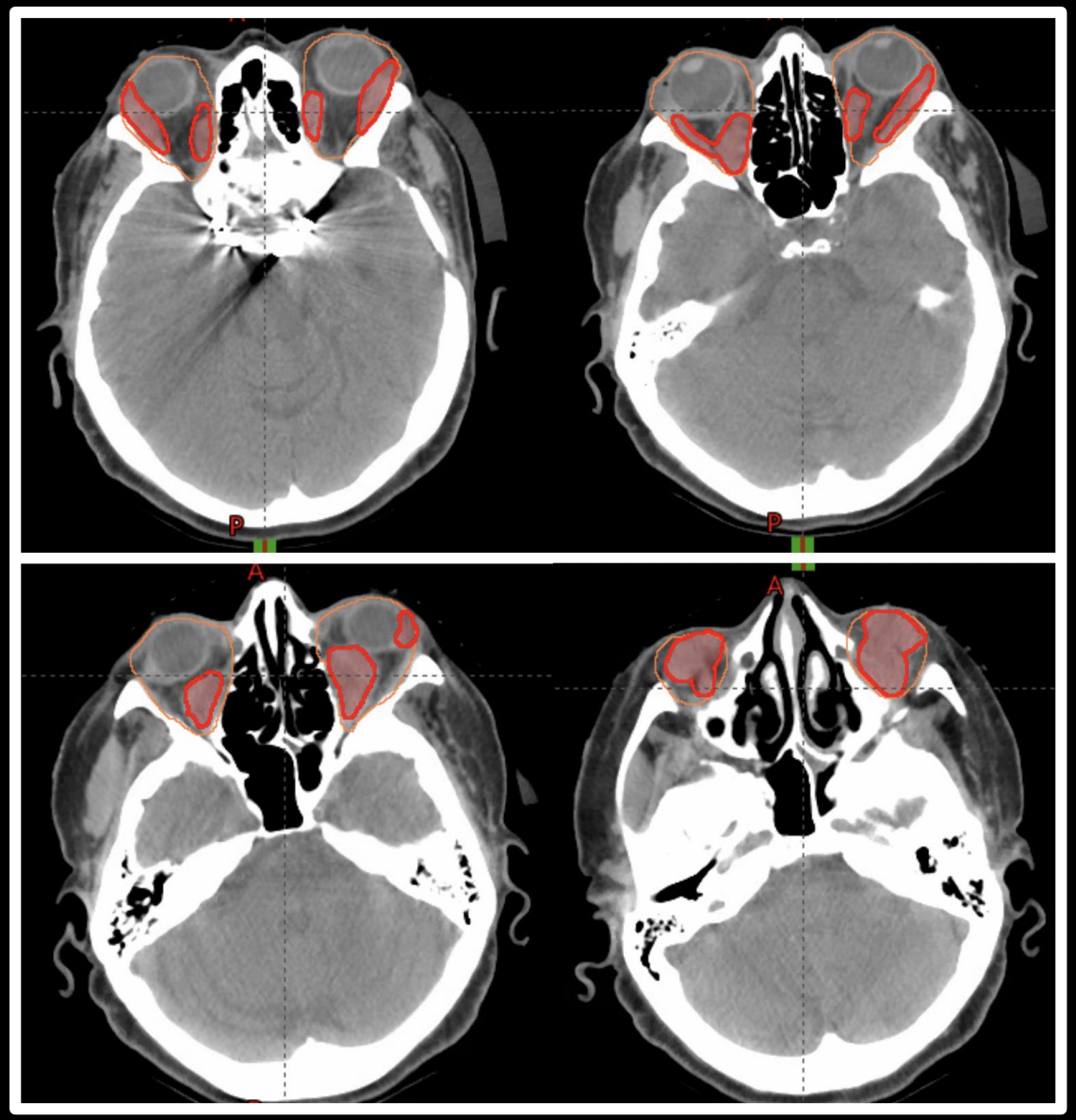


66-year-old- female with multiple co-morbidities and advanced-stage mantle cell lymphoma presents with bilateral periorbital swelling and proptosis.

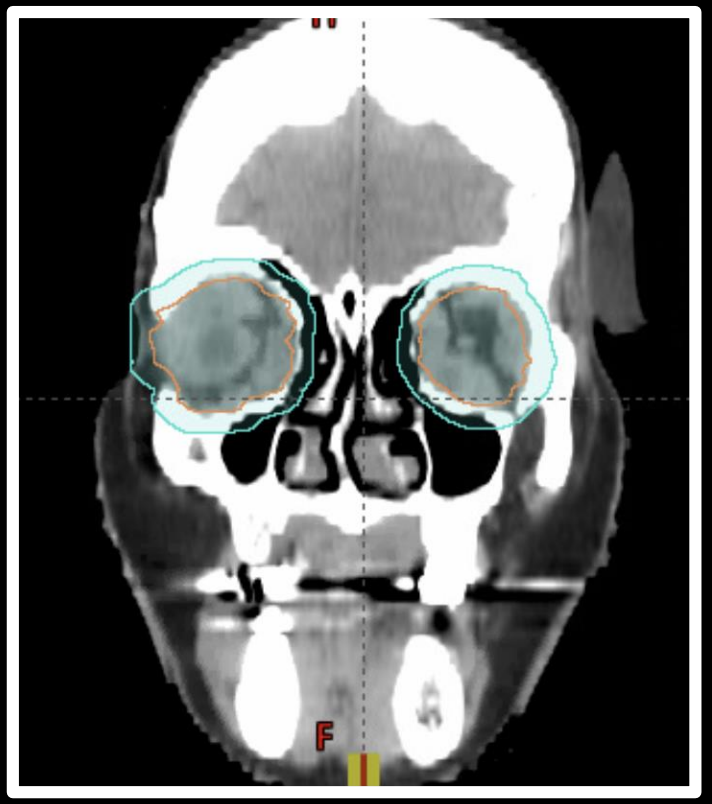
Facial CT demonstrated bilateral peri-orbital soft tissue masses (red arrows).

Plan: Palliative 400 cGy given in 2 fractions to the bilateral orbits





GTV (Red) and CTV (Orange)
contours shown on the axial images.



CTV (orange) and PTV (Blue) shown on the coronal image.

Technique: 3D-conformal therapy with opposed lateral fields

Take home message:
Low dose radiation of 4 Gy is an acceptable dose to treat indolent lymphoma in the orbits