

“I See You”

Changing Lives of
Children Living With
Retinoblastoma



“There are poisons that blind you, and poisons that
open your eyes.”

–August Strindberg

Epidemiology

- Rare Tumour
- 1 in 17000 live births
- Approximately 50 new cases in SA
- Present as a white pupil or strabismus

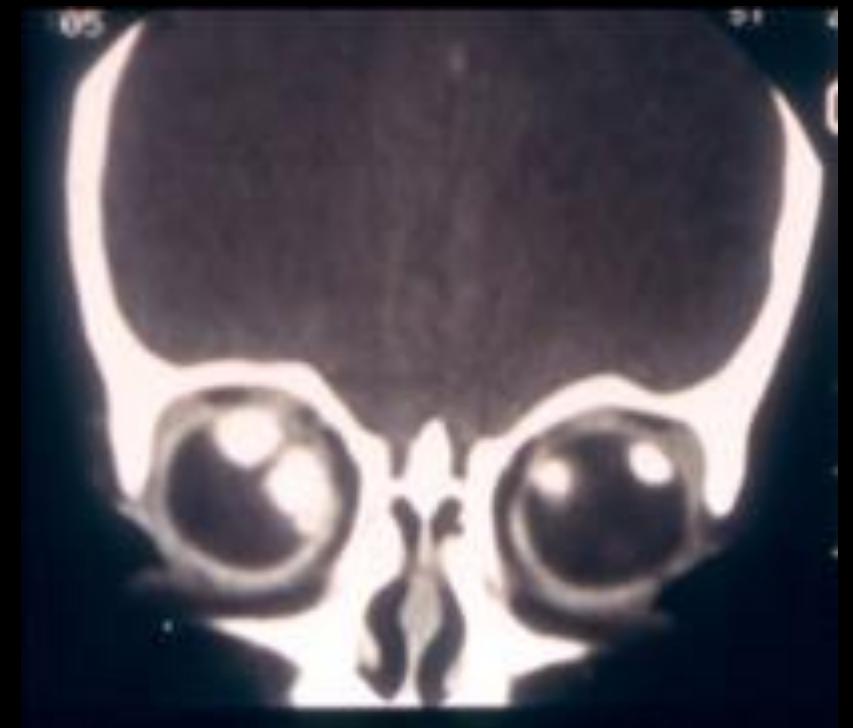
Cause of Retinoblastoma

- Tumour of retinal precursor cells
- Absence of both RB1 genes
- Mostly occurs in the eyes of children under 2 years of age

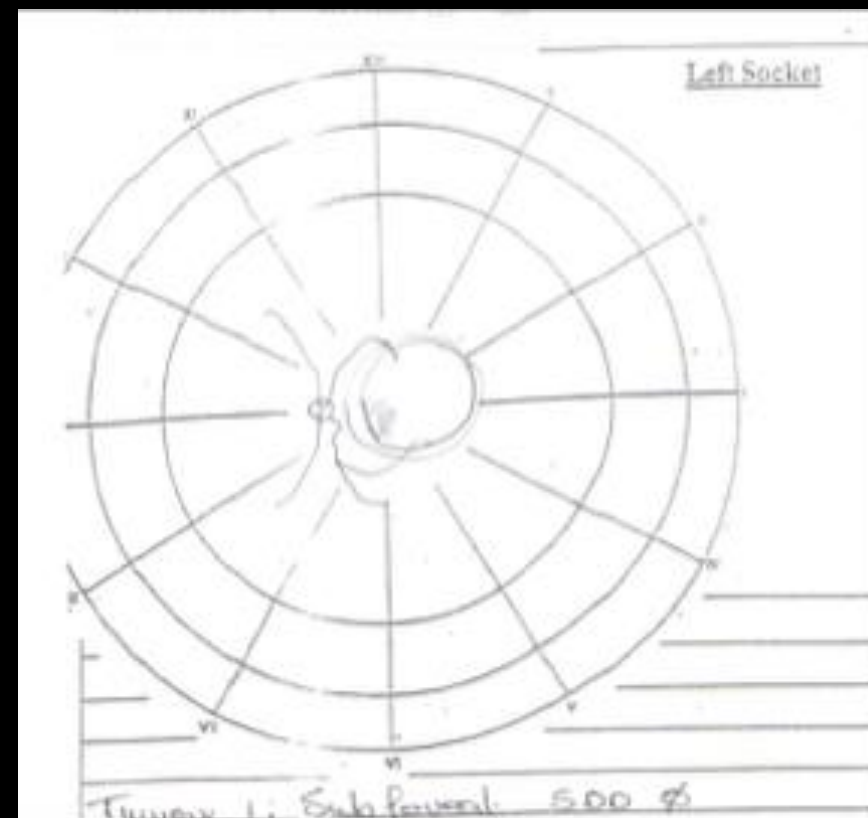
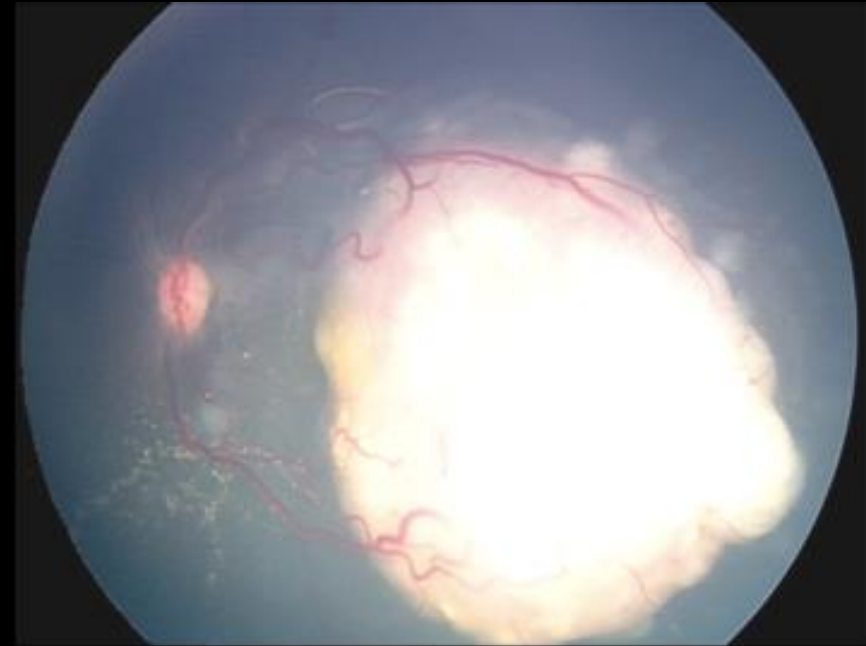
International Staging of Retinoblastoma

Stage 0	Stage 1	Stage 2	Stage 3	Stage 4
No Histology Group A Group B Group C Group D Group E	Histology No orbital involvement +/- high risk features	Histology Microscopic orbital invasion	Histology Macroscopic orbital invasion	Histology Matastasis Bone Brain

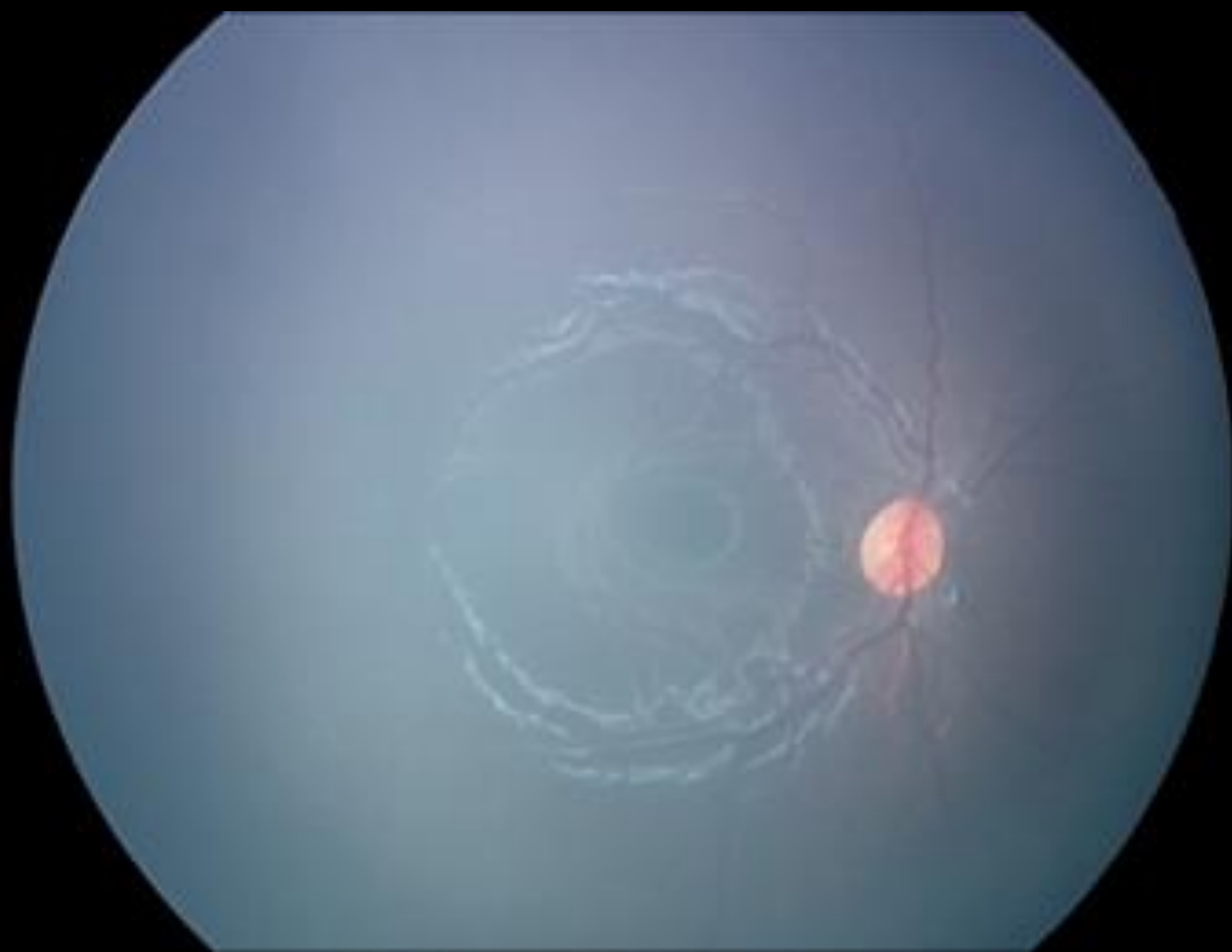
Diagnosis



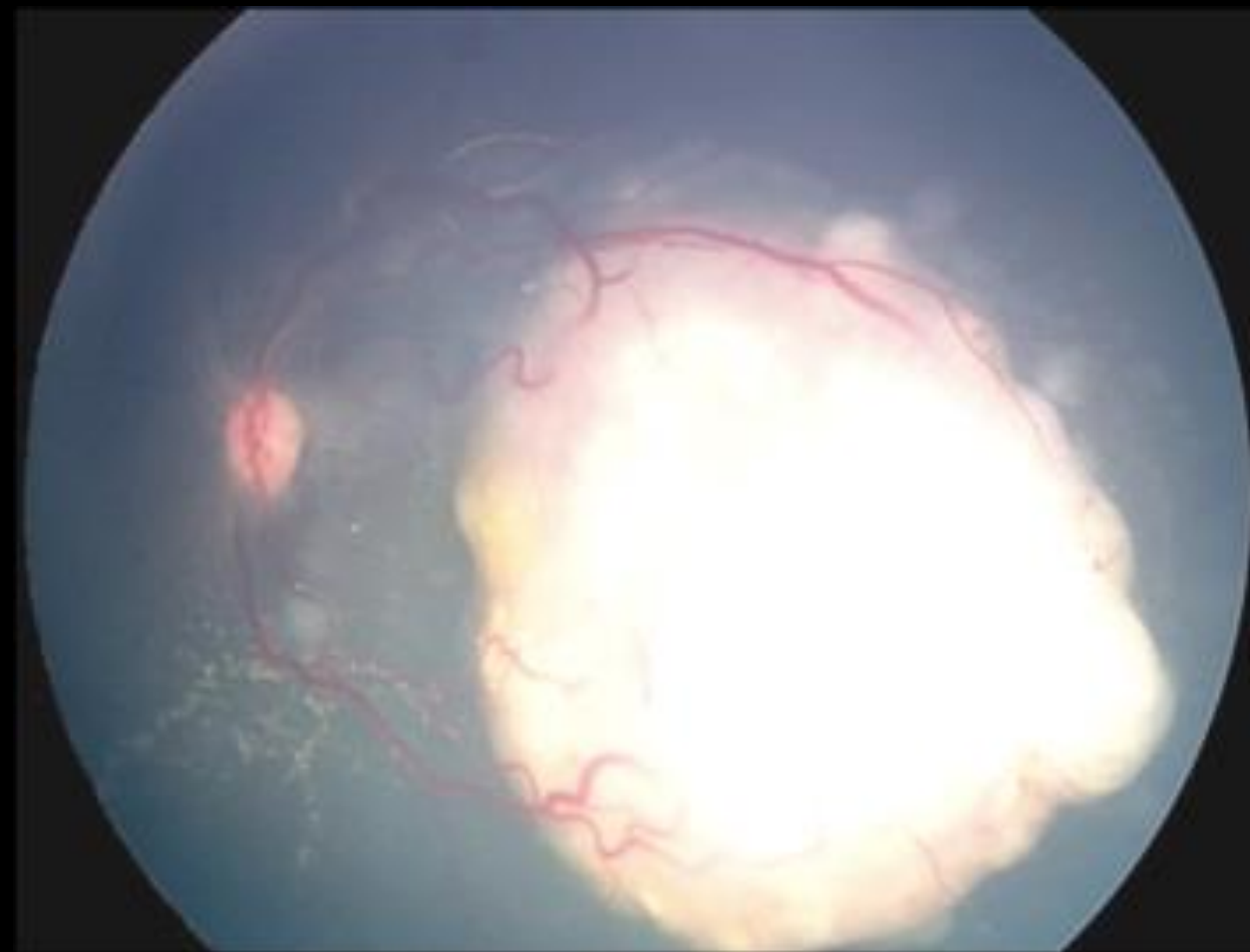
Retcam



Normal Fundus

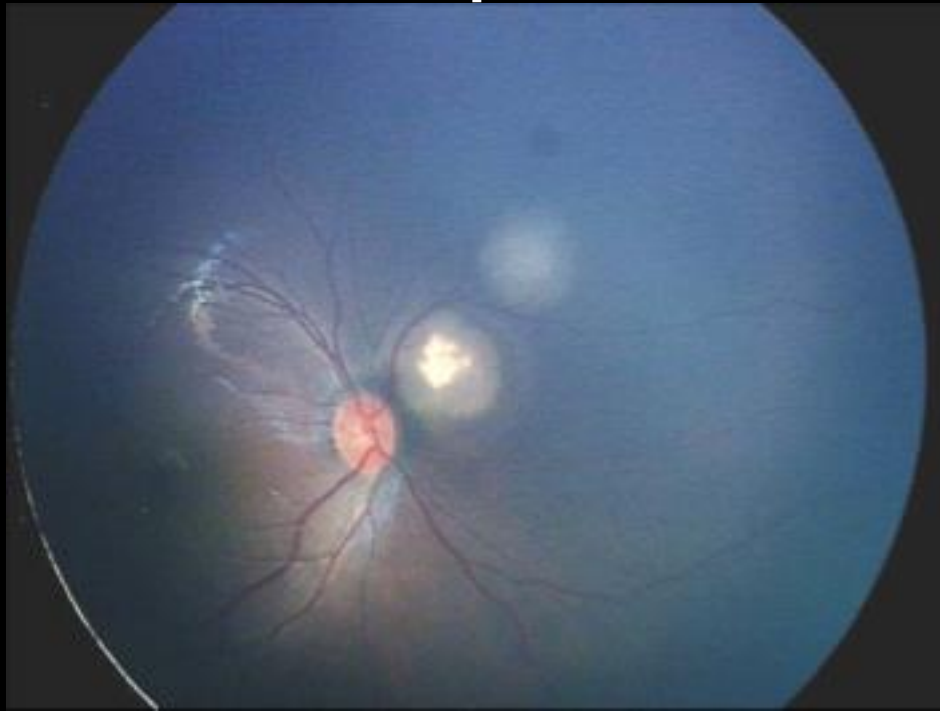


Retinoblastoma

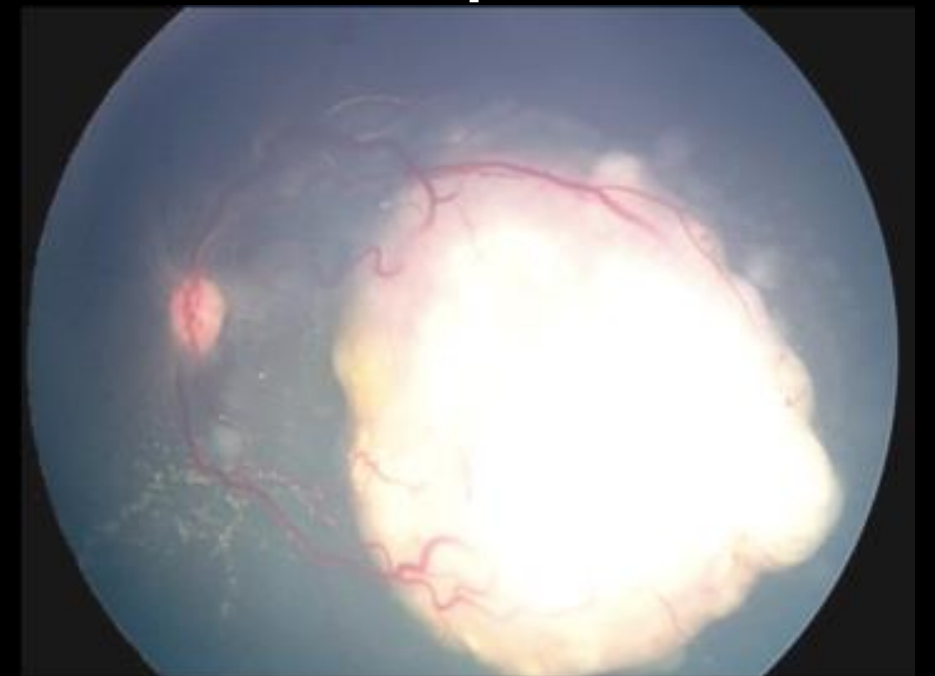


Retinoblastoma Groups

Group A-B

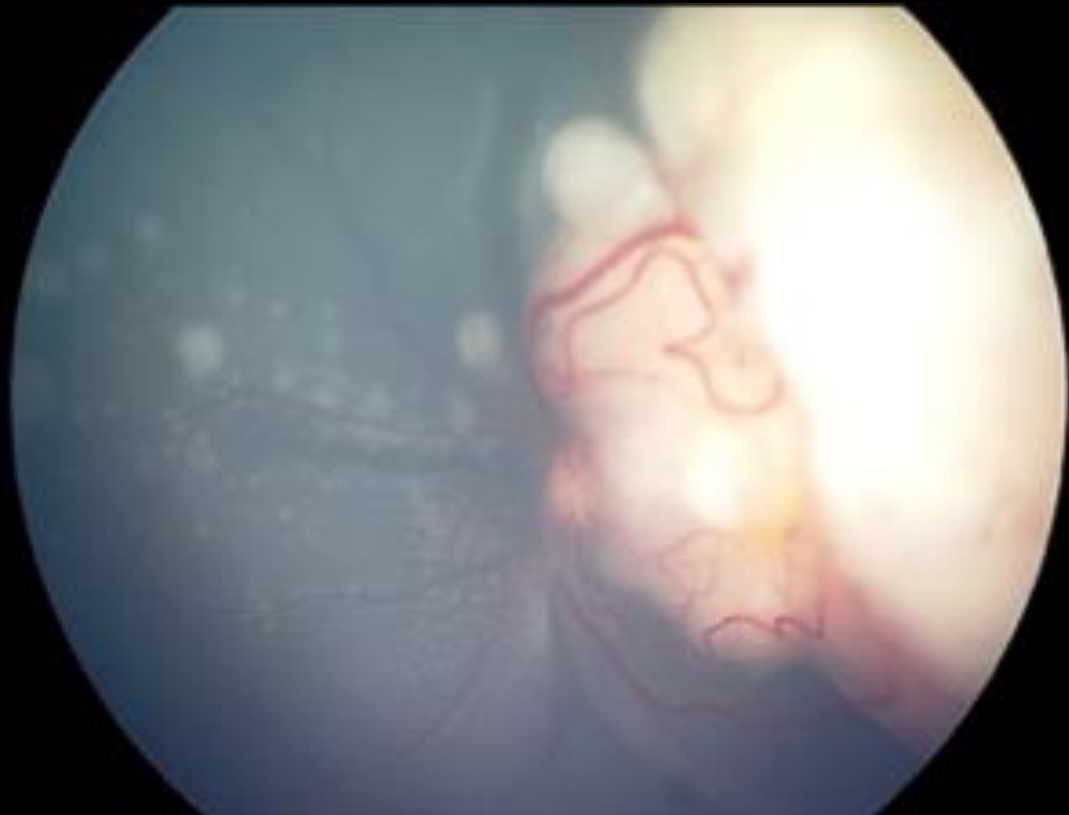


Group C-D



Group E





Treatment Modalities for Intraocular Retinoblastoma

- Focal Therapy
 - Laser Therapy
 - Cryotherapy
 - Brachytherapy
- Whole eye radiation
- Chemotherapy
- Enucleation +/- Orbital Radiation

EBRT
1st eye salvage
therapy for
intraocular
retinoblastoma

1950

1990

**Systemic
chemotherapy
with focal
therapy**

**Increased lifelong risk
on second malignant
neoplasms**



**Almost 100%
eye salvage
rates for
groups A&B**

**Most group D&E
still enucleated**

Adverse effects

**Ototoxicity
Neurotoxicity
Secondary Leukemia**

Lumbroso-Le Rouic, L., I. Aerts, et al. (2008).
"Conservative treatments of intraocular
retinoblastoma." *Ophthalmology* 115(8): 1405-1410.

2010



Intra-arterial Chemotherapy

Gobin,P. Intra-arterial chemotherapy for the Management of Retinoblastoma. 2011 Arch Ophth 129(6) 732 - 737

Group D

Results: (n=95 eyes)

60% in previously treated eyes

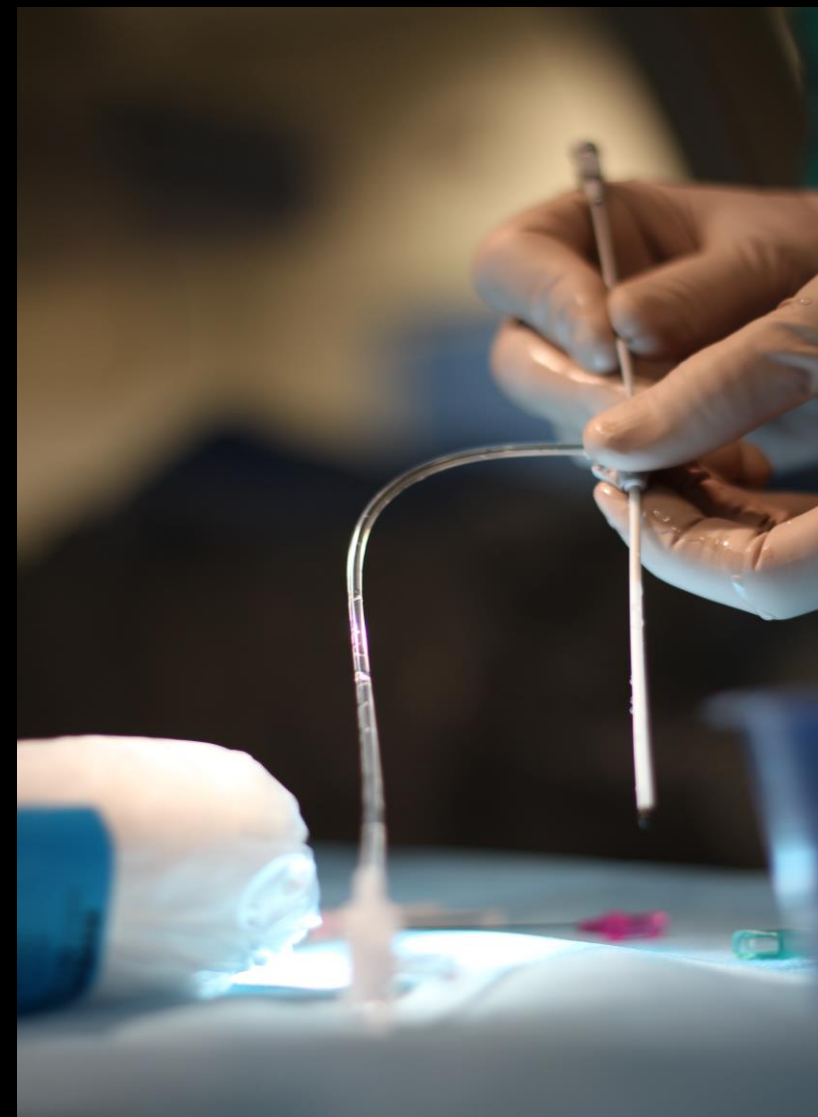
81% in first line treatment

median follow-up 13 months

Intra Arterial Chemotherapy

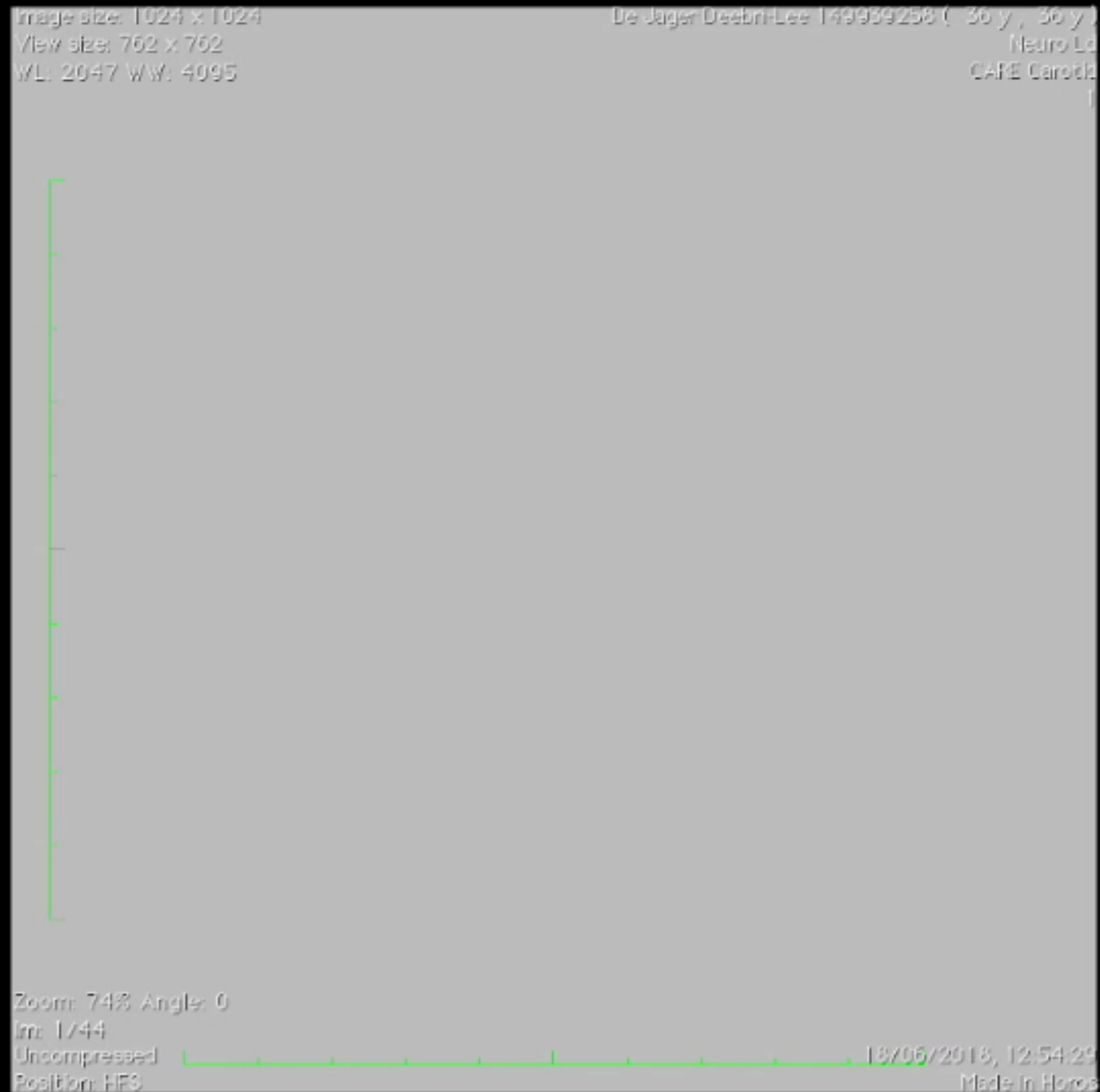
Malphalan

Topotecan

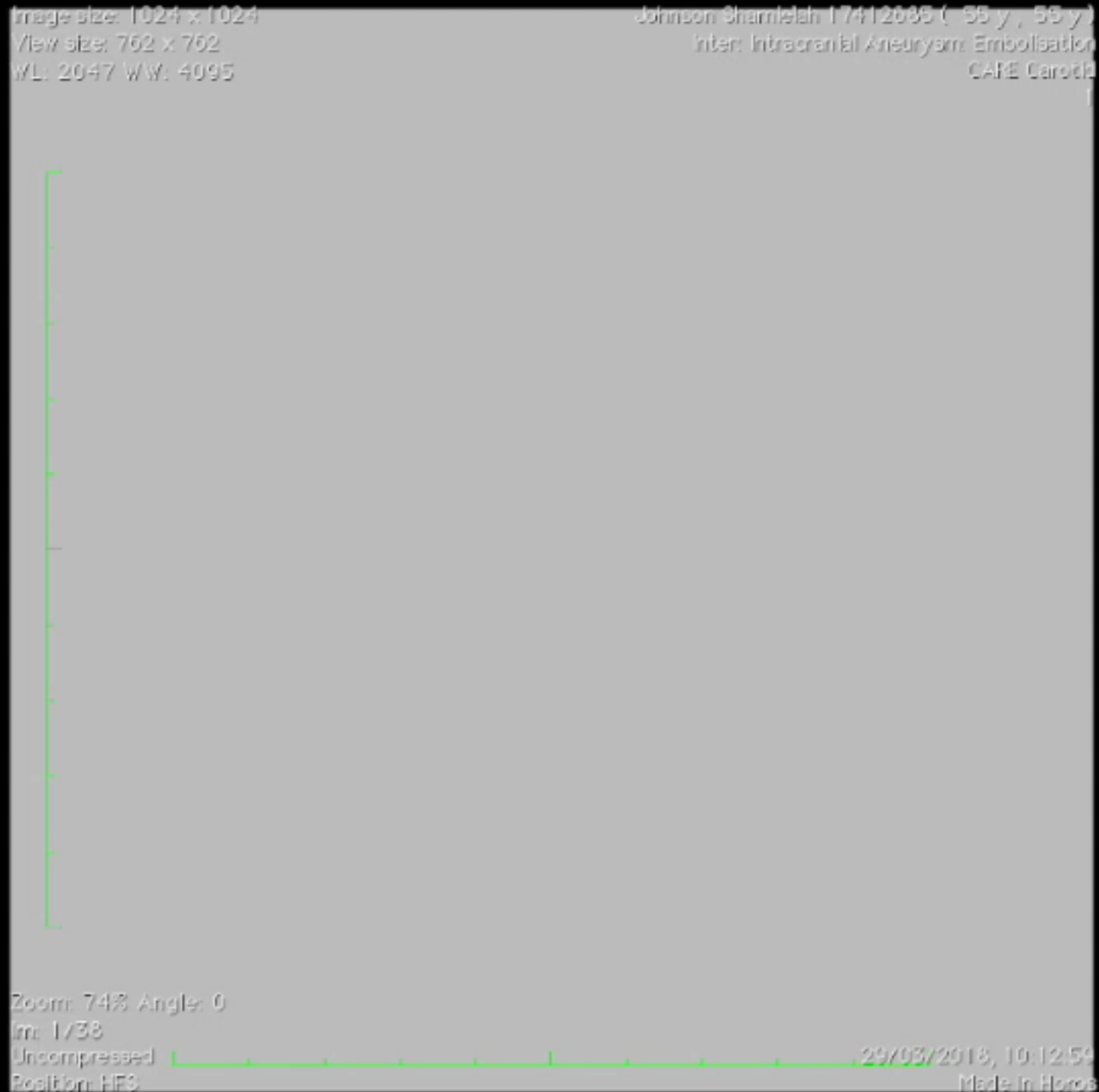




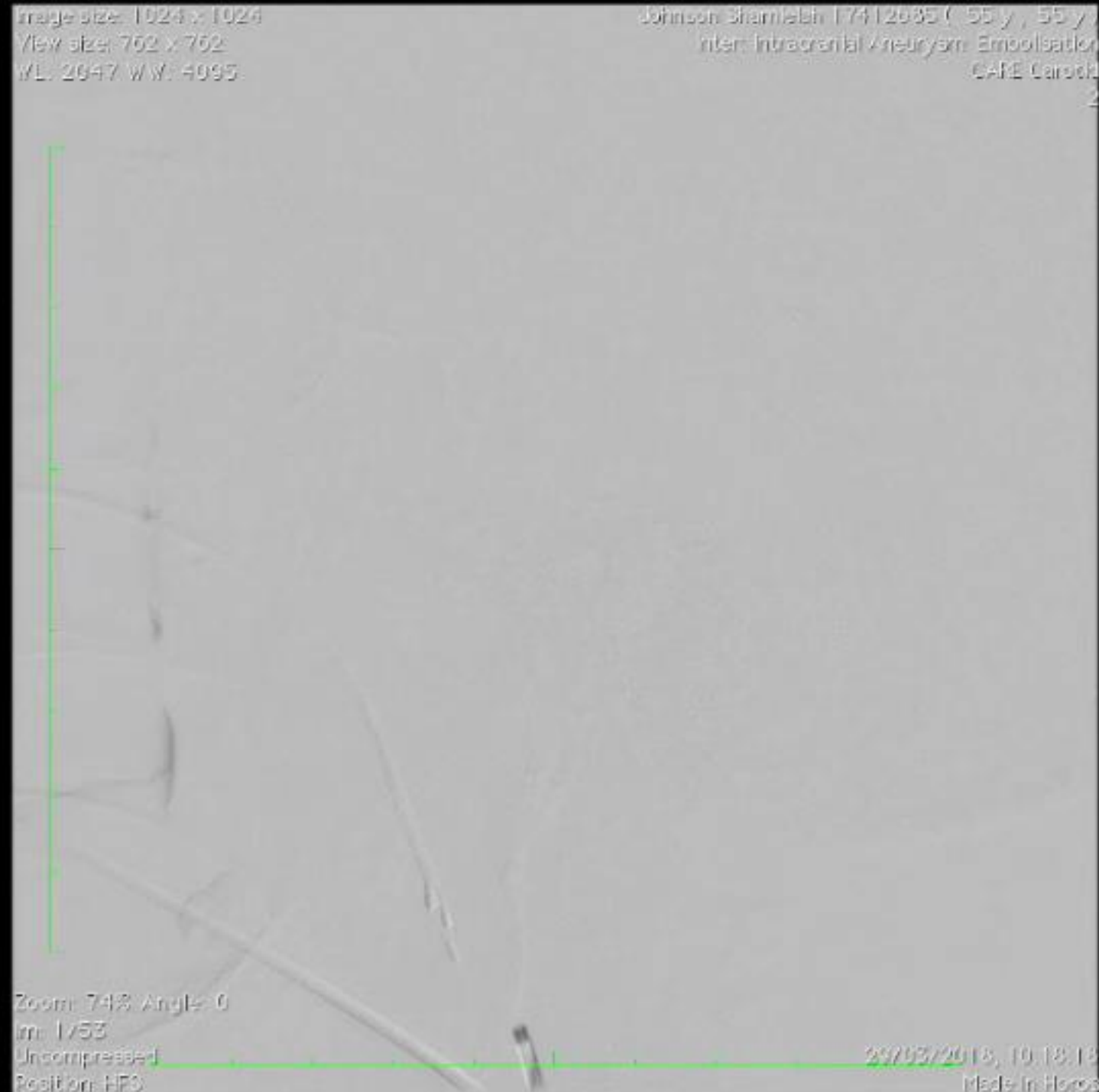
Internal Carotid Injection



ICA Injection With No Choroidal Blush



External Carotid Injection



ECA Selective Injection

Image size: 1024 x 1024
View size: 762 x 762
WL: 2047 WW: 4095

Seabra Kayden Antonio-160207080 (- 7 y, 6 y)
Neuro Ld
CARE Carotid
4

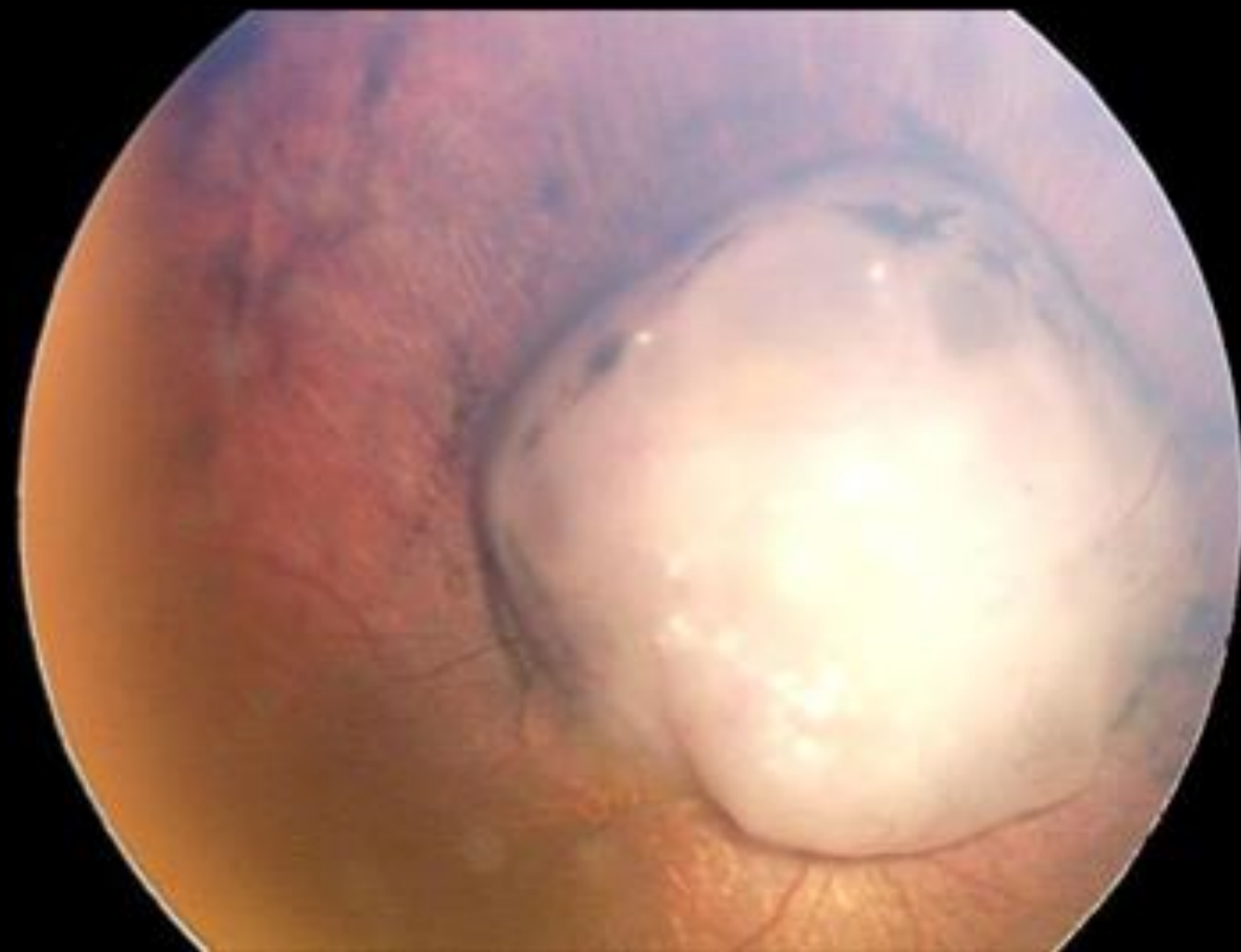
Zoom: 74% Angle: 0
In: 1/32
Uncompressed
Position: AP0

09/02/2017, 09:08:16
Made In Horos

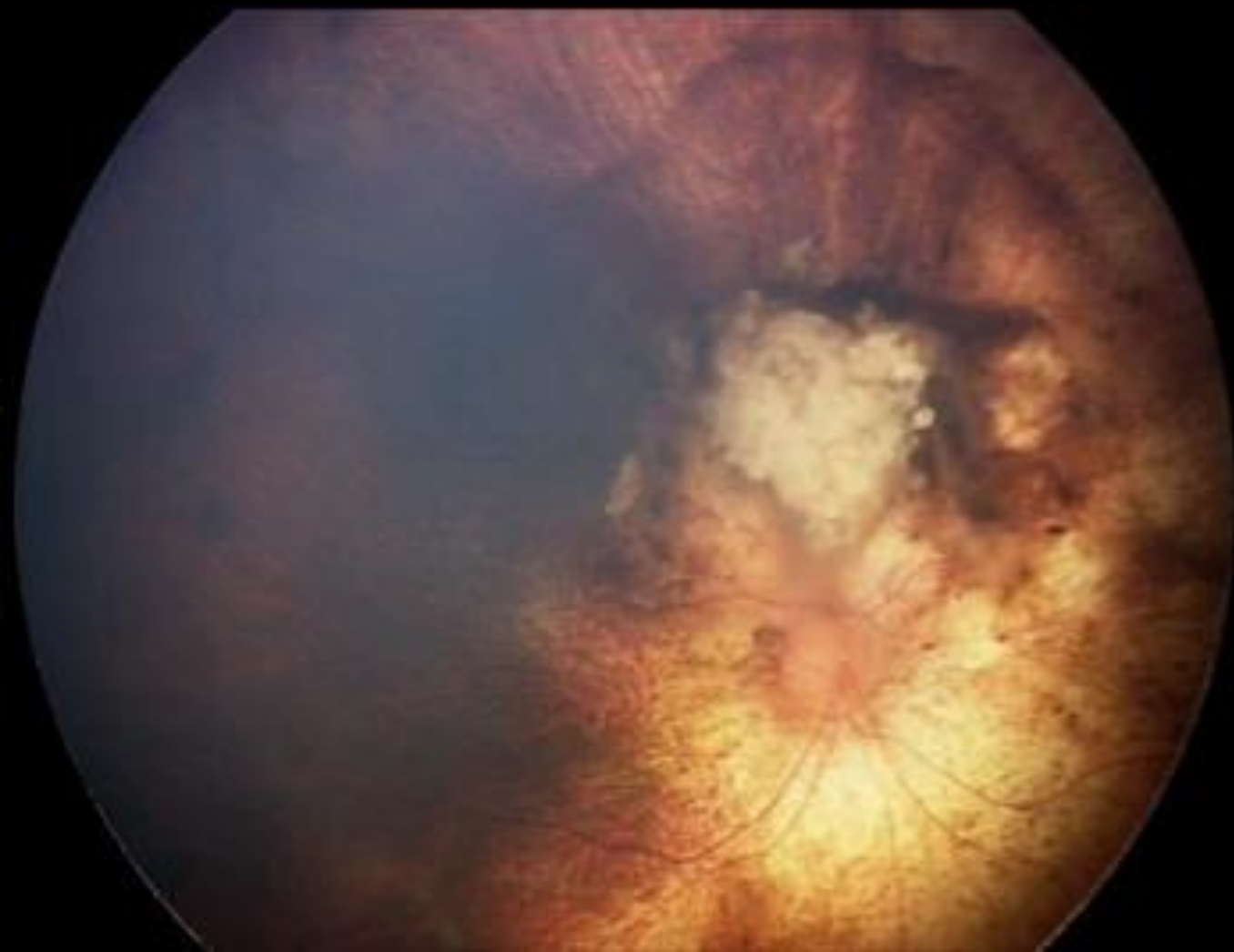
Risks

- 3rd Nerve Palsy
- Blindness
- Neutropenia

Choroidal scarring with No visual improvement



Nov 2016

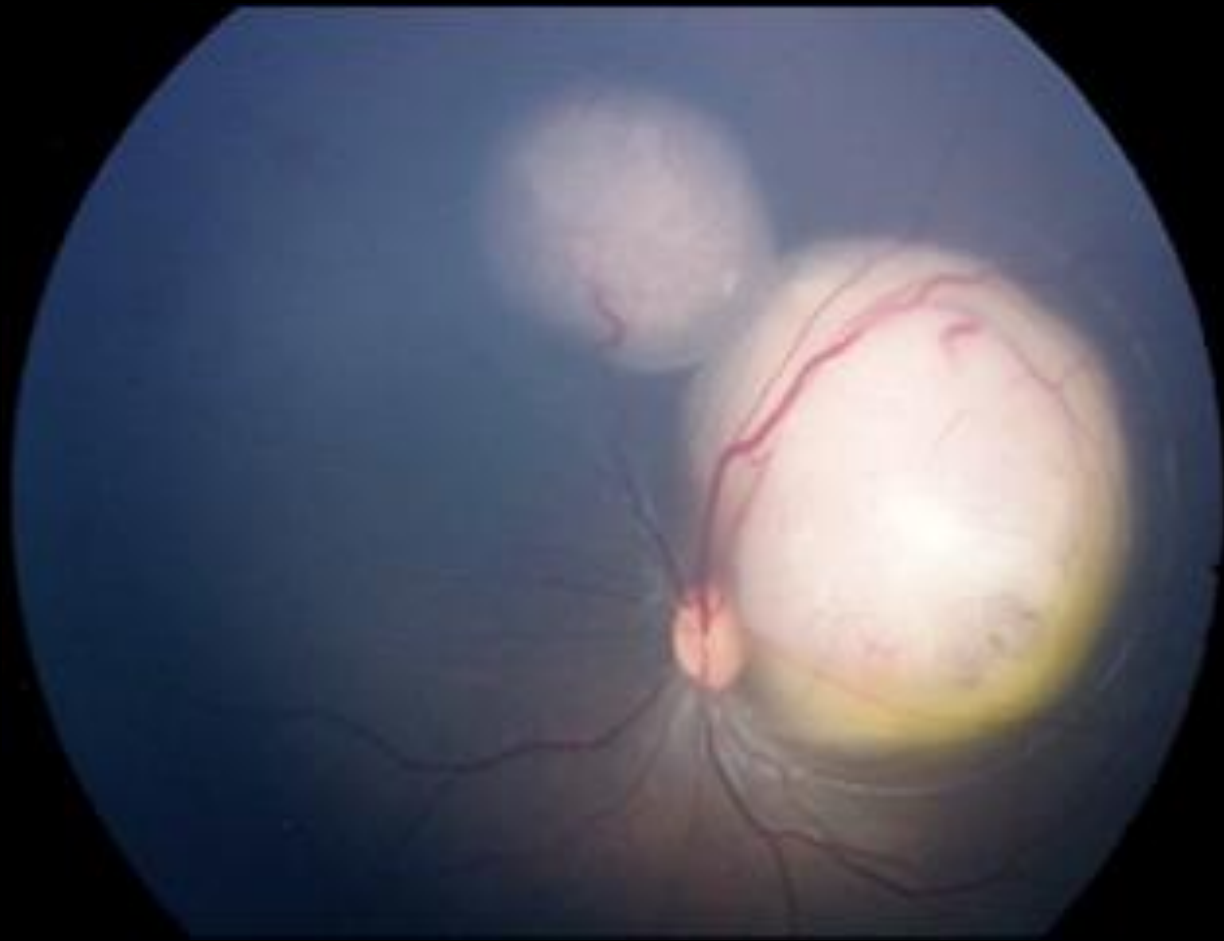


Sept 2017

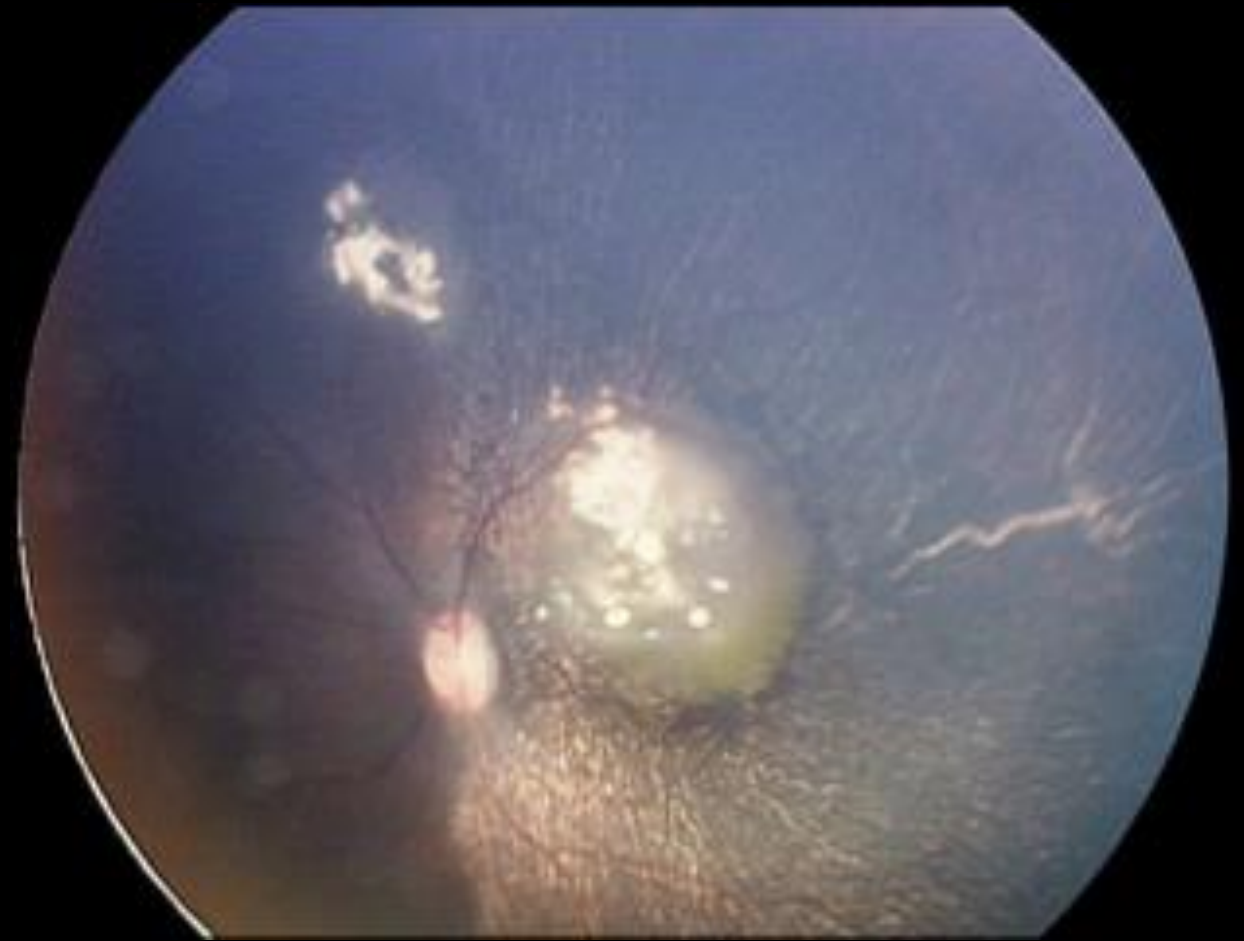
Results

	Total Cases	Total Cannulated	Good response	Poor response	Issues
Unilateral	11	10	7	2 1 Died	2 children in stage 3 1 not screened
Bilateral	9	9	6	3	1 fish flesh regression

July 2017



Oct 2017



Feb 2018

Acknowledgements

- Dr Karin Leucona
- Dr Hamzah Mustak
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