What to do when structure and function are different in a POAG Patient?

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P.C., Female, 49 years

Complains: visual fatigue, miodesopsia

Ocular exam:

VA both eyes: 20/20 at distance

Refraction: RE +0,25sf; LE +0,50sf

Tonometry(Goldmann):

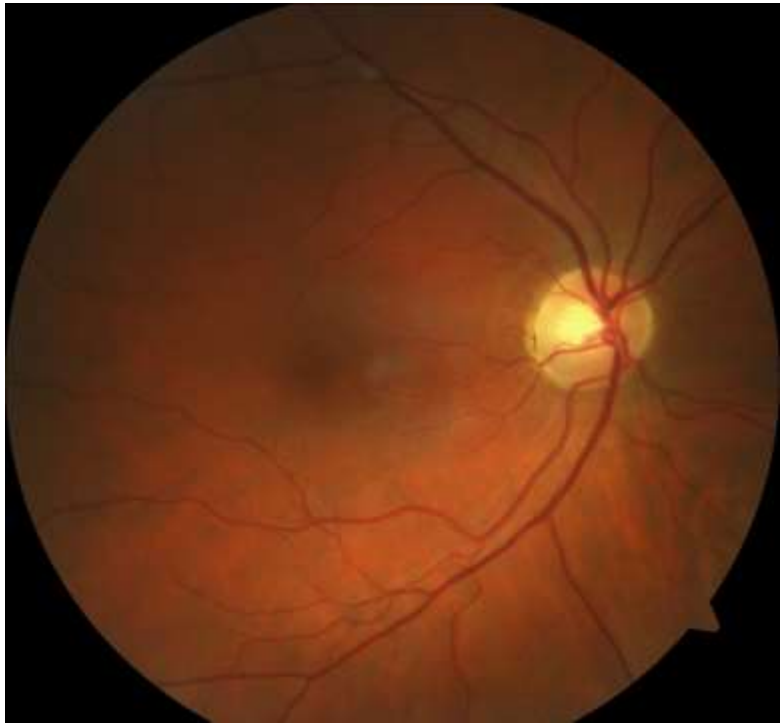
RE 28mmHg; LE 29mmHg (2014)

Pachimetry: RE 554micro; LE 565micro

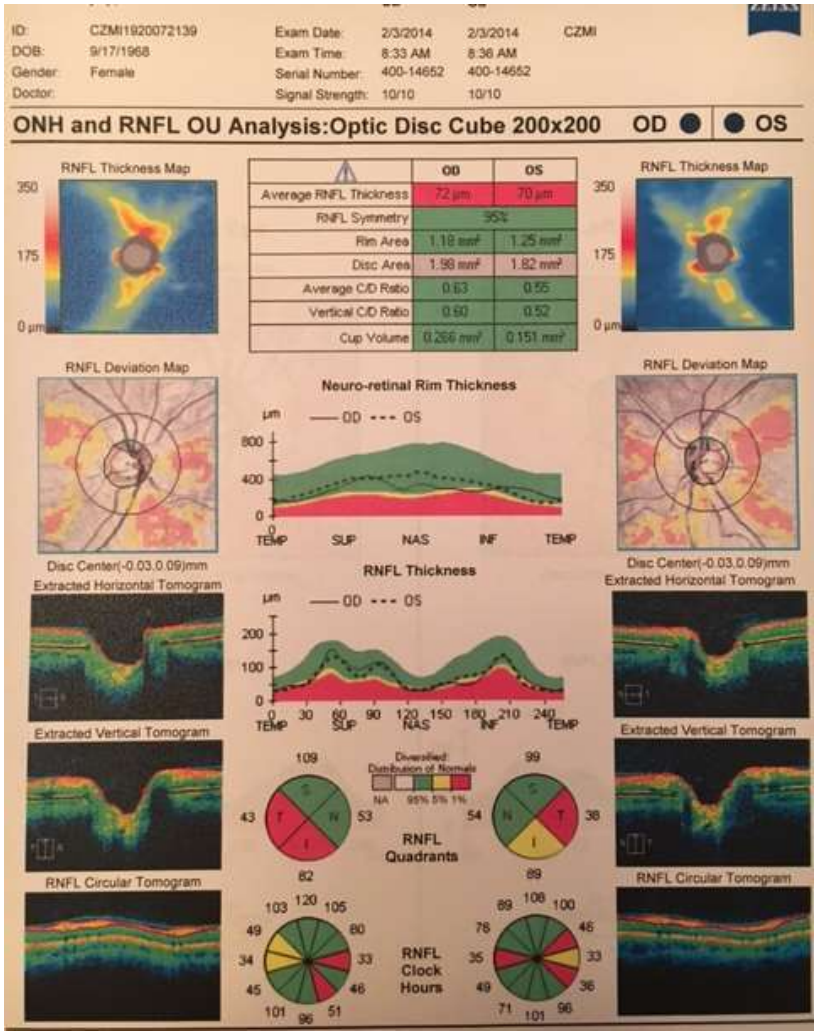
BM: anterior pole normal both eyes

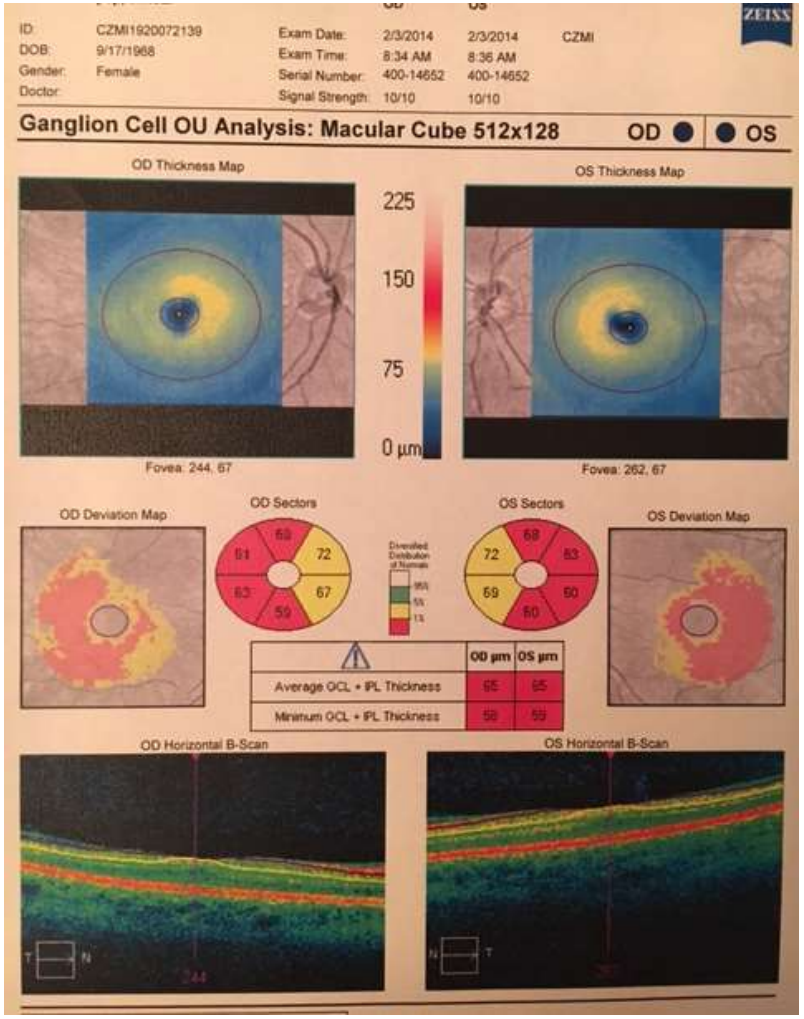
Gonioscopy: open angle grade 3

Optic nerve
RE: C/D ratio 0,5
LE: C/D ratio 0,4

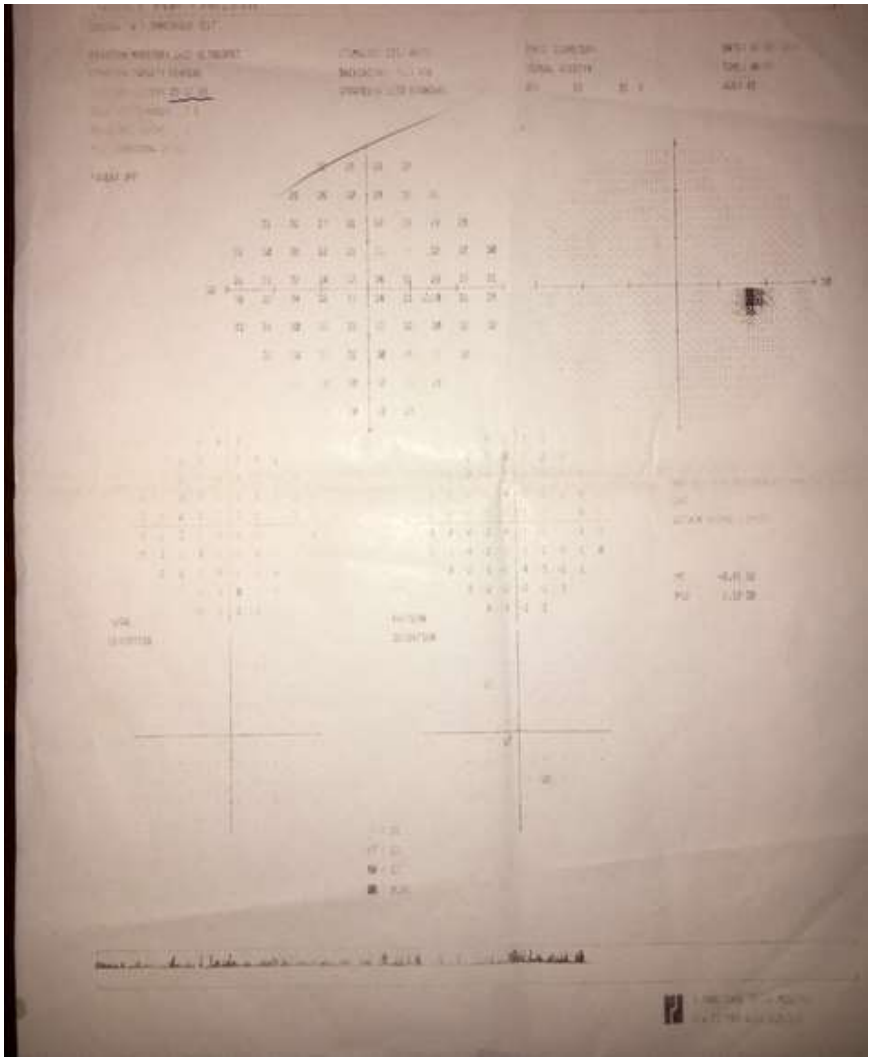


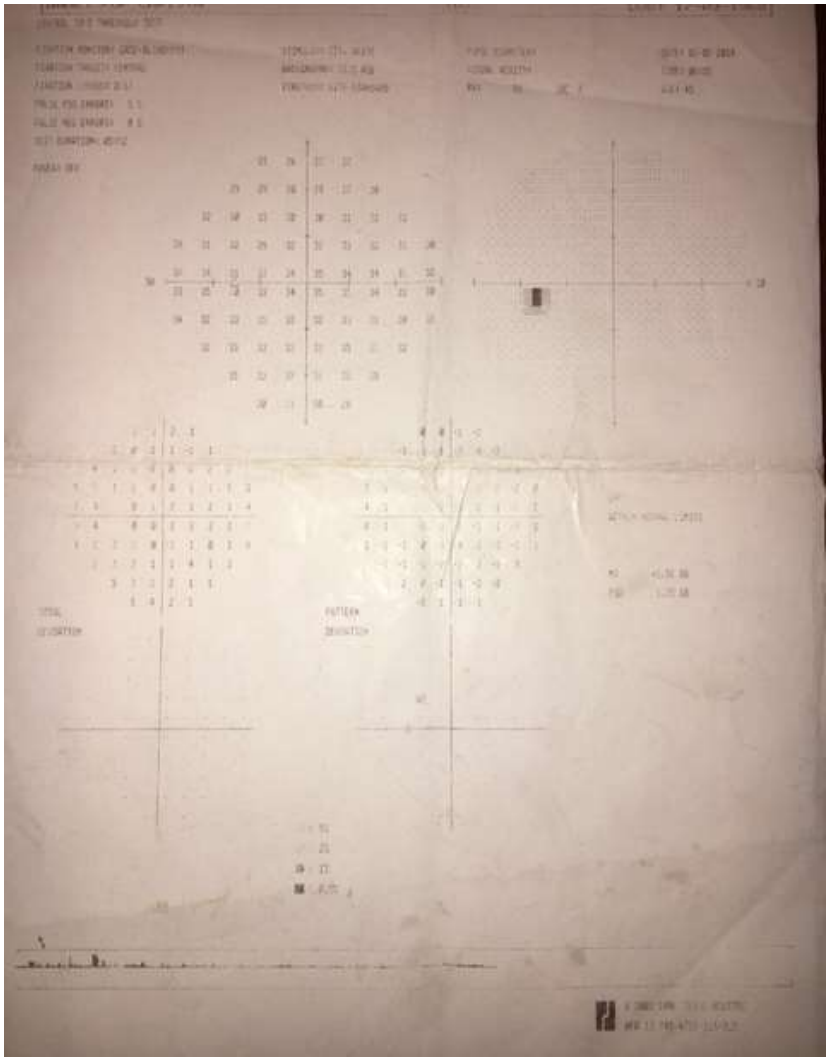
OCT EXAM 2014





Visual Field 2014





What to do at this moment?

What do we have:

Structure	Function
modified	normal

Tonometry: high IOP (repeated)

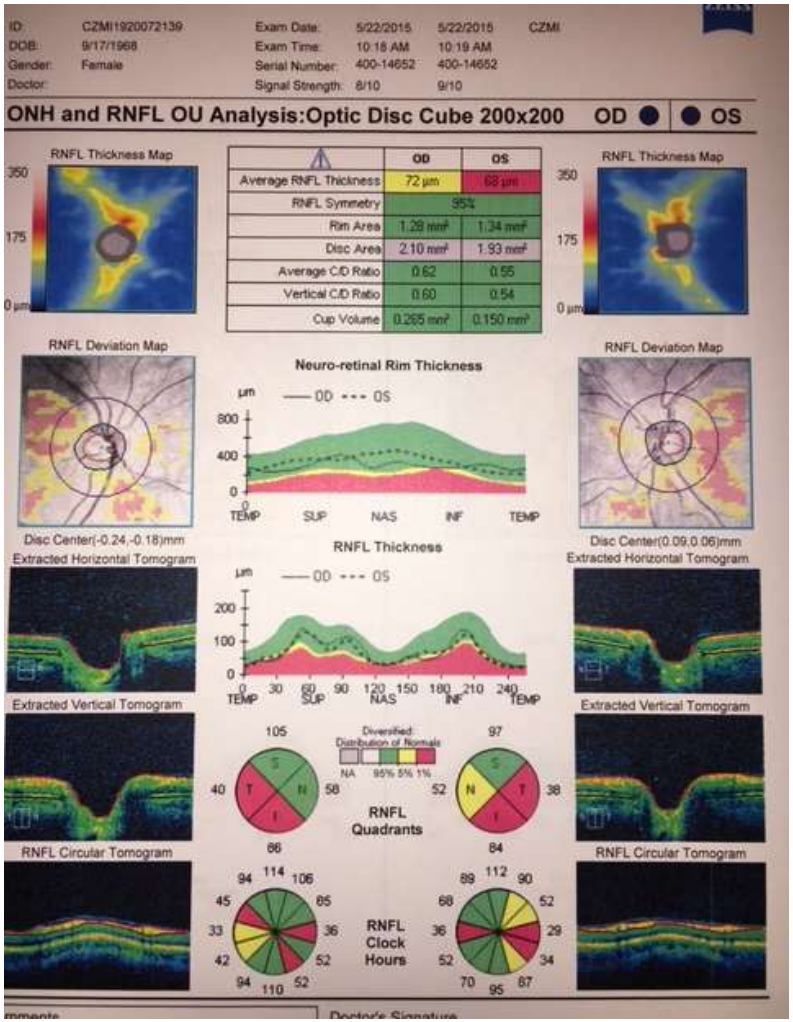
MRI- NORMAL

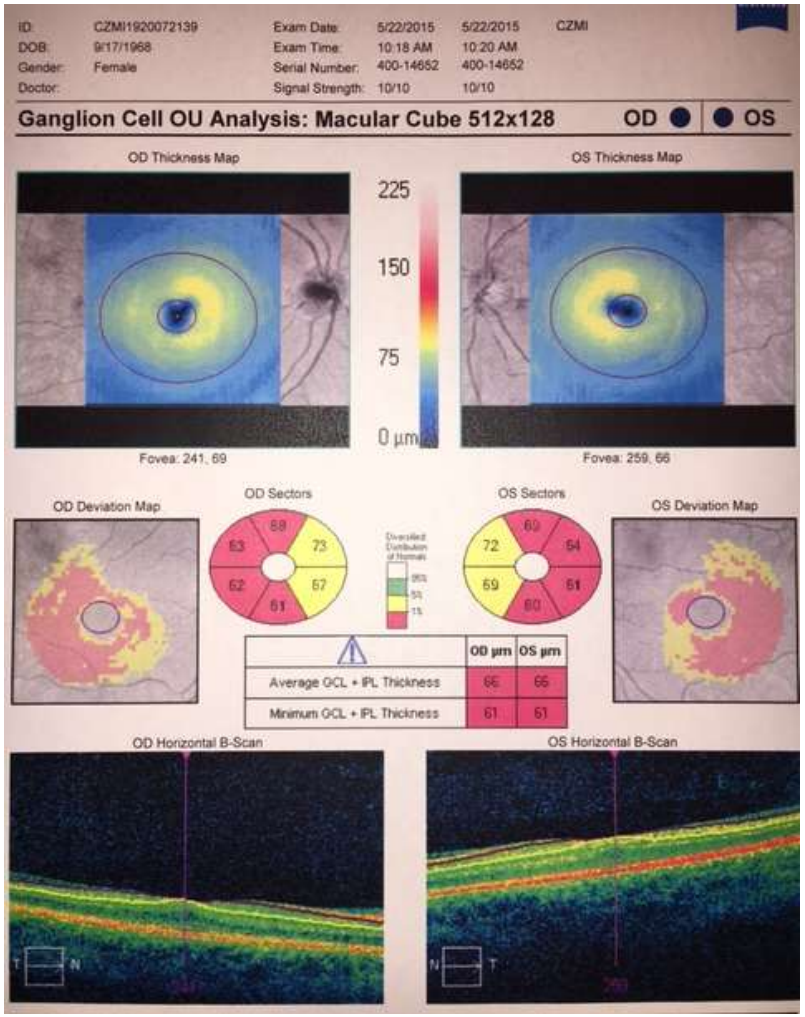
What to do at this moment?

MONOTHERAPY with PROSTAGLANDINS

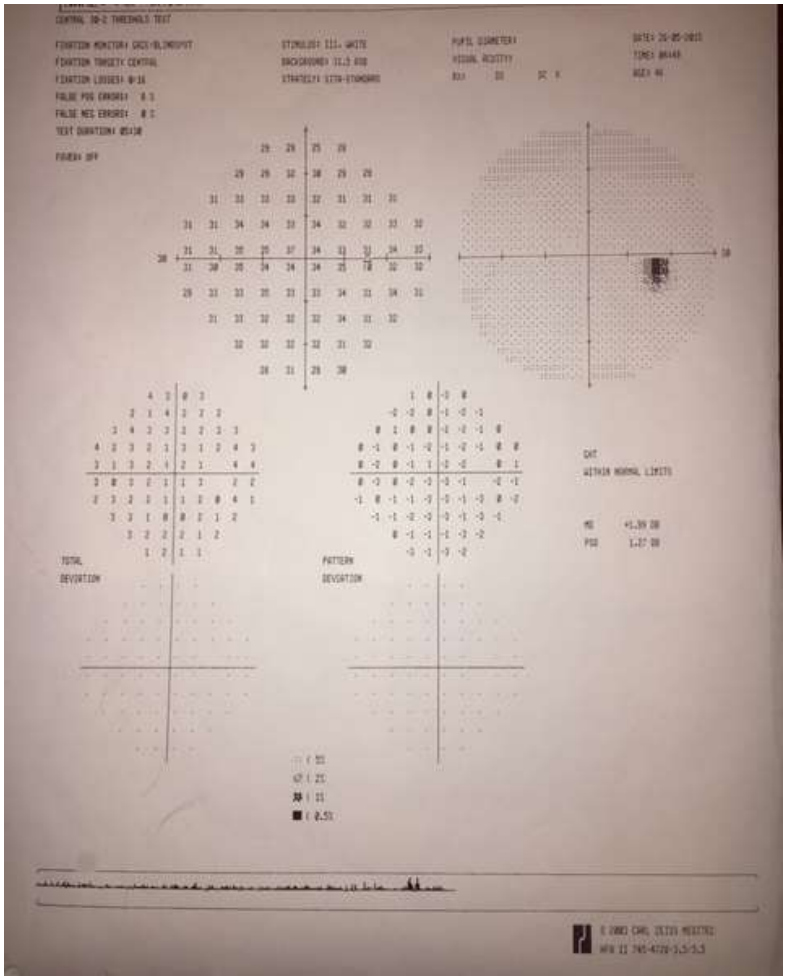
FOLLOW UP : IOP OVER 20mmHg

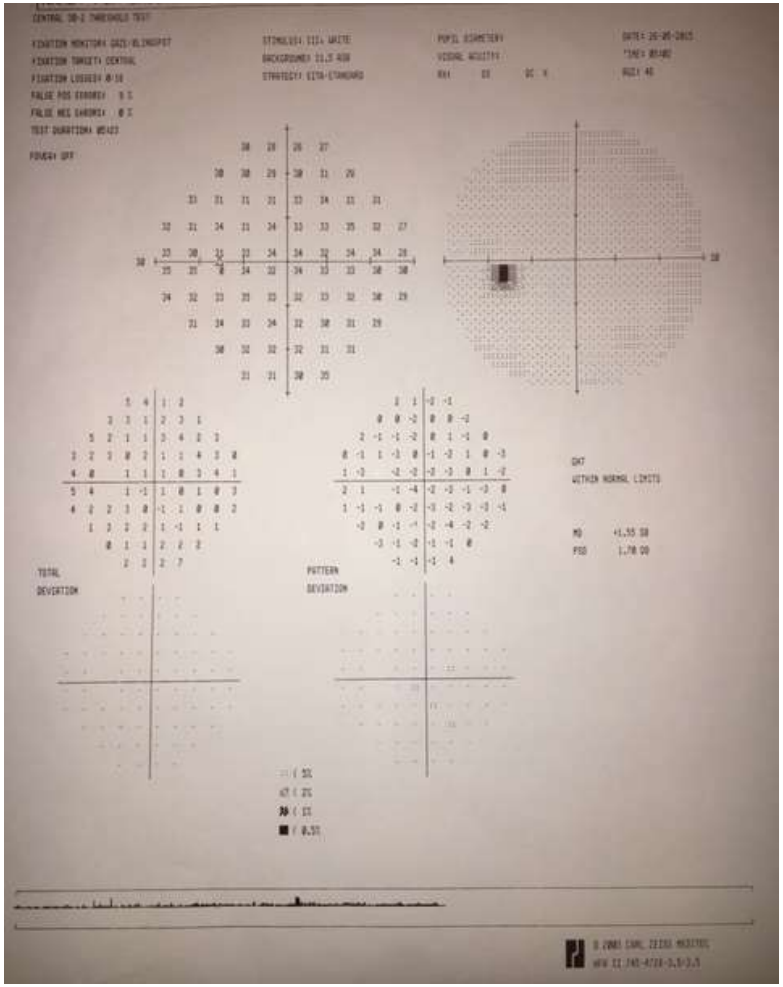
OCT EXAM 2015





VISUAL FIELD 2015





CLINICAL STATUS

TONOMETRY (Goldmann):

OVER 20mmHg both eyes

Decided to change to Fixed combination (ACI+BB) bid

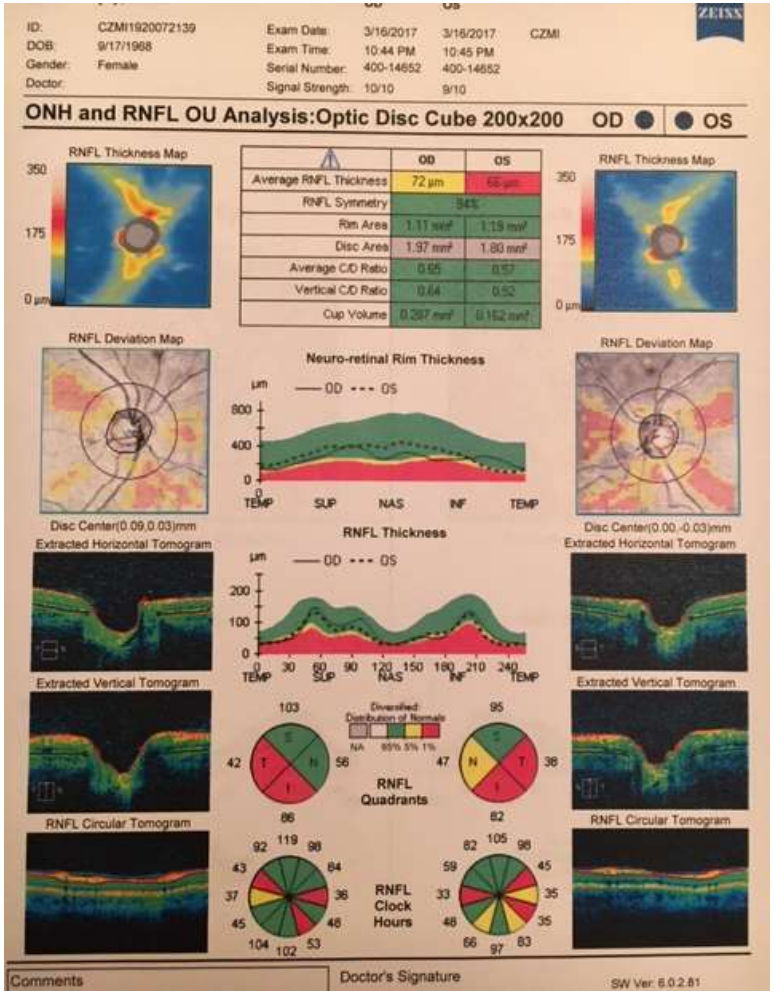
FOLLOW UP:

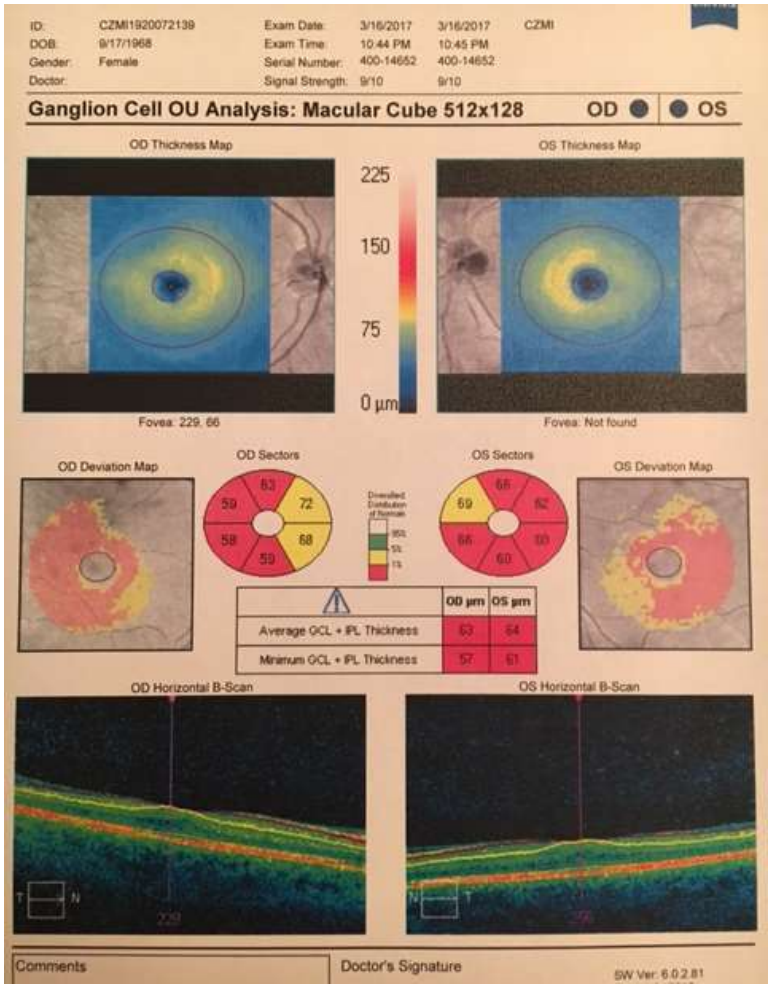
OCULAR TENSION at upper limit: 19-20mmhg

AFTER SIX MONTH I decided to change on triple therapy: P+BB+ACI

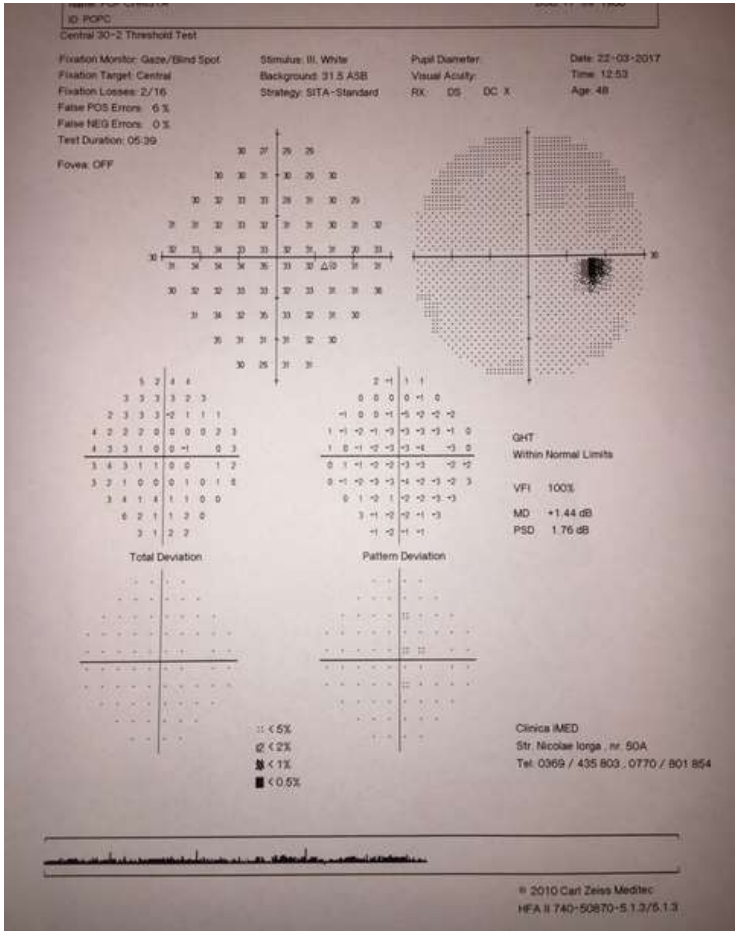
PIO: RE 16mmhg LE: 17mmhg

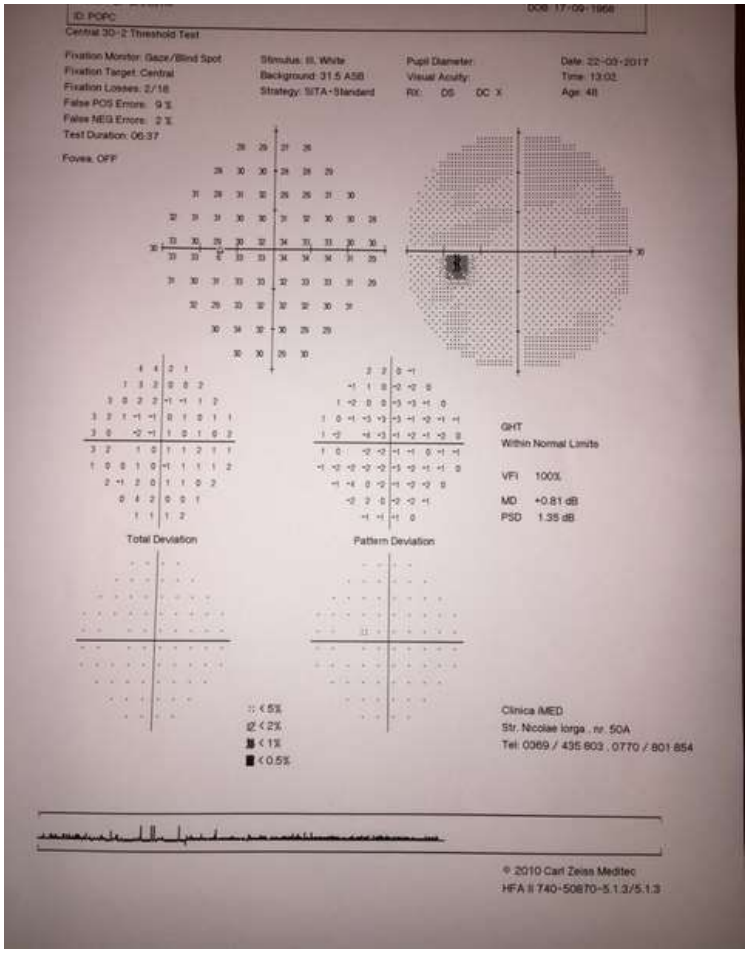
ACTUAL STATE





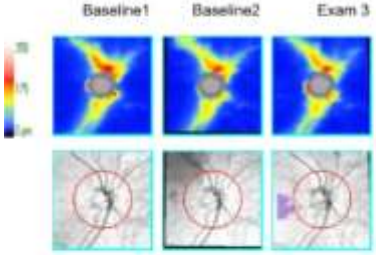
VISUAL FIELD 2017





ID:	CZMI1920072139	Exam Date:	2/3/2014	3/16/2017	CZMI
DOB:	9/17/1968	Exam Time:	8:33 AM	10:44 PM	
Gender:	Female	Serial Number:	400-14652	400-14652	
Doctor:		Signal Strength:	10/10	10/10	

Guided Progression Analysis: (GPA™) OD ●



RNFL and ONH Summary Parameters

		Exam Date/Time	Serial Number	Registration Method	SS	Avg RNFL Thickness (µm)	Inf Quadrant RNFL (µm)	Sup Quadrant RNFL (µm)	Rim Area (mm^2)	Average Cup-to-Disc Ratio	Vertical Cup-to-Disc Ratio
Baseline1:	1	2/3/2014 8:33:03 AM	400-14652		10/10	72	82	109	1.18	0.63	0.60
Baseline2:	2	5/22/2015 10:18:55 AM	400-14652	R2	8/10	72	85	105	1.28	0.62	0.60
Current:	3	3/16/2017 10:44:29 PM	400-14652	R2	10/10	71	86	104	1.11	0.65	0.64

Registration Methods
R2 - Registration based on translation and rotation of OCT fundus
R1 - Registration based only on translation of disc center

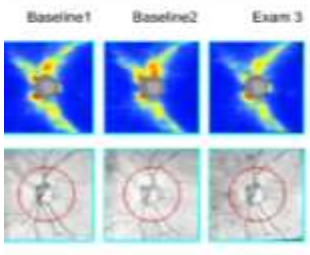
Likely Loss
Possible Loss
Possible Increase

Compared to baseline, statistically significant loss of tissue detected. For Average RNFL, Superior R
Inferior RNFL, Rim Area the values have decreased. For Cup-to-Disc Ratios and Cup Volume value
increased.

Compared to baseline, statistically significant increase detected. For Average RNFL, Superior RNFI
Inferior RNFL, Rim Area values have increased. For Cup-to-Disc Ratios and Cup Volume values h
decreased.

CZMI1920072139		Exam Date:	2/3/2014	3/16/2017	CZMI
9/17/1968		Exam Time:	8:36 AM	10:45 PM	
Female		Serial Number:	400-14652	400-14652	
		Signal Strength:	10/10	9/10	

ed Progression Analysis: (GPA™) OD ○ ● OS



RNFL and ONH Summary Parameters

		Exam Date/Time	Serial Number	Registration Method	SS	Avg RNFL Thickness (µm)	Inf Quadrant RNFL (µm)	Sup Quadrant RNFL (µm)	Rim Area (mm^2)	Average Cup-to-Disc Ratio	Vertical Cup-to-Disc Ratio	Cup Volum (mm
line1:	1	2/3/2014 8:36:31 AM	400-14652		10/10	70	89	99	1.25	0.55	0.52	0.15
line2:	2	5/22/2015 10:19:28 AM	400-14652	R2	9/10	68	85	96	1.34	0.55	0.54	0.15
ent:	3	3/16/2017 10:45:52 PM	400-14652	R2	9/10	66	83	95	1.19	0.57	0.52	0.16

Registration Methods
R2 - Registration based on translation and rotation of OCT fundus
R1 - Registration based only on translation of disc center

ly Loss
ible Loss
e Increase

Compared to baseline, statistically significant loss of tissue detected. For Average RNFL, Superior RNFL, Inferior RNFL, Rim Area the values have decreased. For Cup-to-Disc Ratios and Cup Volume values have increased.

Compared to baseline, statistically significant increase detected. For Average RNFL, Superior RNFL, Inferior RNFL, Rim Area values have increased. For Cup-to-Disc Ratios and Cup Volume values have decreased.

CONCLUSION

-large amount of evidence indicating that progressive optic disc or RNFL changes can frequently be seen before the appearance of statistically significant defects on SAP

-a strong need for approaches combining structural and functional data for detection of progression and estimation of rates of change in the disease.