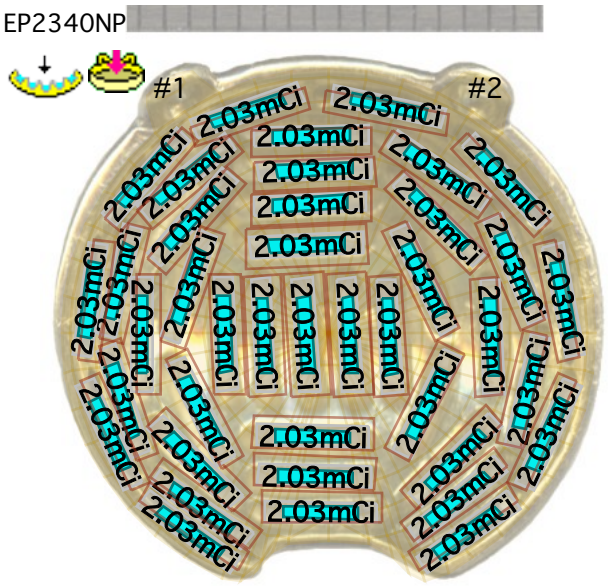
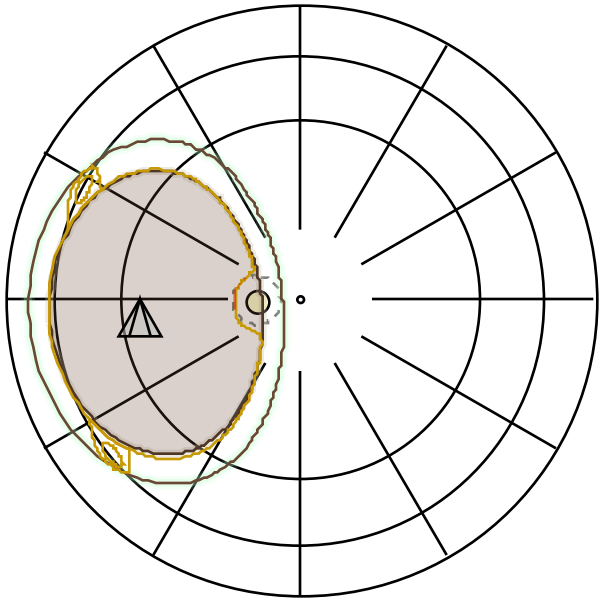
Plaque Simulator Treatment Plan

Patient name:	Big Tumor Tutorial	PSID: 1957326C
Medical record #:		Ethnicity code: 0
CPT Code(s):	77263	
Other:		Gender: M
Institution:		DOB: Oct 31, 1952
Implant:	Wed Jul 2, 2014 at 10:00 _____	Age at implant: 62
Removal:	Wed Jul 9, 2014 at 10:00 _____	
Duration (hours):	168.000	Range: ± 3.36 hr (2.0%)
Prescription:	85.00 Gy to Tumor 1 Apex @ 11.40 mm	

Plaque:	1 (EP2340NP)
Nominal diameter:	21.76 mm
Number of sources:	40 of 40
Suture coordinates:	#1 (7:41,5.2mm), #2 (9:54,5.2mm)
Total strength:	I-125 (IAI-125A) 103.2U (81.23mCi) on 7/2/14
Avg. strength:	2.579U (2.031mCi) on 7/2/14

Tumor #:	1
Apex (margin):	11.40 mm (2.00 mm)
Post.pole->center (ext.coord):	13.0 mm (8:50,14.5mm)
Radial x Circumferential:	17.51 x 17.50 mm
Length x Width:	17.53 x 17.53 mm
Area (Volume):	303.7 sq.mm (1.13 mL)
% of retinal surface:	26.1 %





Plaque Simulator Treatment Plan

EP2340NP CAX (mm)	Avg. Dose Rate (cGy/hr)	Total Dose (Gy)	
0.00 (external sclera)	204.4	343.3	
1.00 (inner sclera)	287.5	483.0	
2.00	309.6	520.1	
3.00	243.1	408.4	
4.00	198.6	333.7	
5.00	165.2	277.5	
6.00	138.7	233.0	
7.00	117.3	197.0	
8.00	99.73	167.6	
9.00	85.08	142.9	
10.00	72.75	122.2	
Critical Site	Avg. Dose Rate (cGy/hr)	Total Dose (Gy)	Distance From Plaque (mm)
Prescription point	50.60	85.00	12.58 Tumor 1 Apex @ 11.40 mm
Sclera	287.5	483.0	1.000(from plaque center)
QA_Point	138.7	233.0	6.000(from plaque center)
QA_Check (isotropic pt srce in water)	148.4	249.3	Point/Check = 0.93
Optic disc	105.5	177.2	10.08(center to center)
Opposite retina	13.21	22.19	22.94(from plaque center)
Lens	35.24	59.20	15.85(center to center)
Eye origin	53.67	90.17	12.00(from plaque center)
Macula (posterior pole)	50.52	84.87	13.75(center to center)
Apex of tumor #1	50.60	85.00	12.58(from plaque center)
Dose calc. mode: Line, F[Ø], B[r], Pexp, no T, Slot			

RADIATION SAFETY SURVEYS:

In: OR#__ _____mR/hr meter_____

_____ _____

signature date

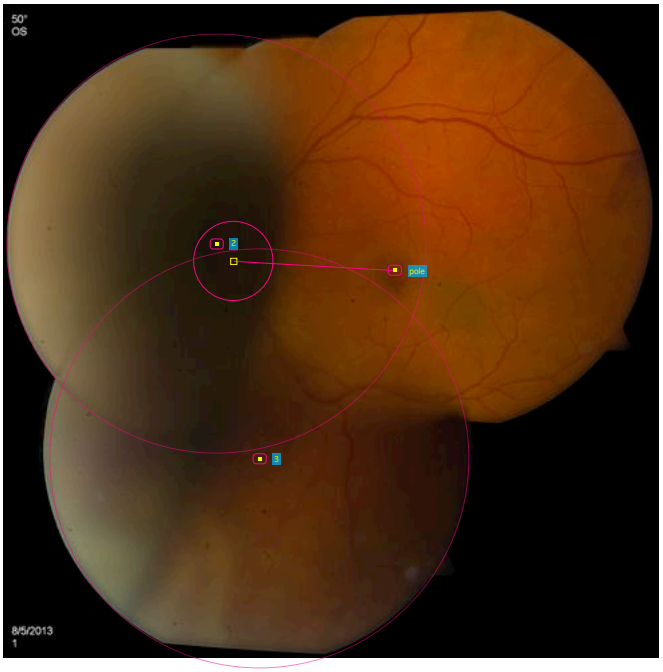
Out: OR#__ _____mR/hr meter_____

Patient _____mR/hr meter_____

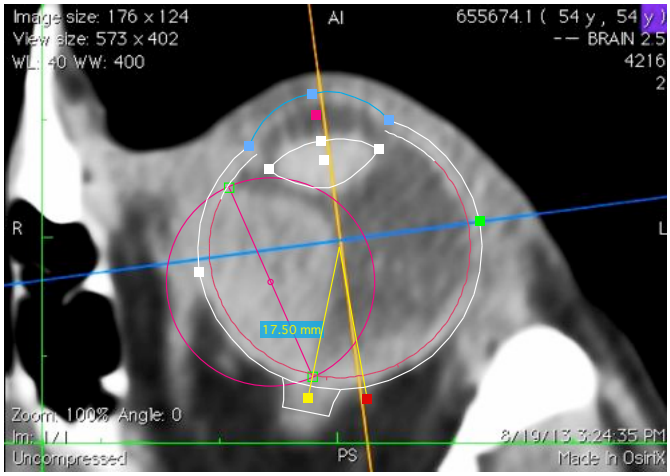
#seeds returned____ misc._____

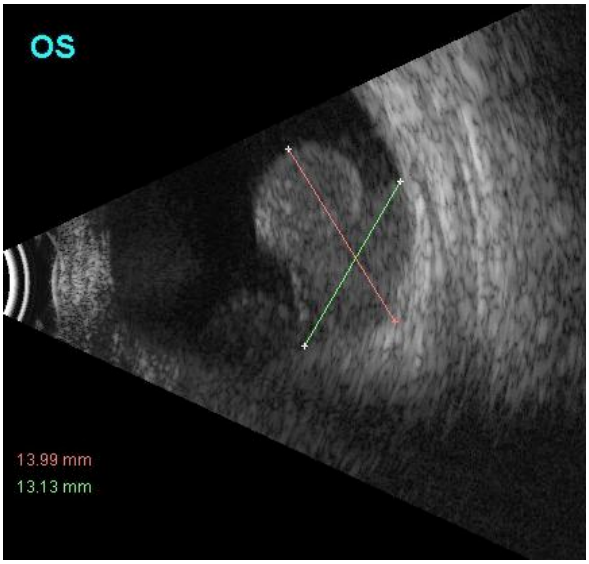
_____ _____

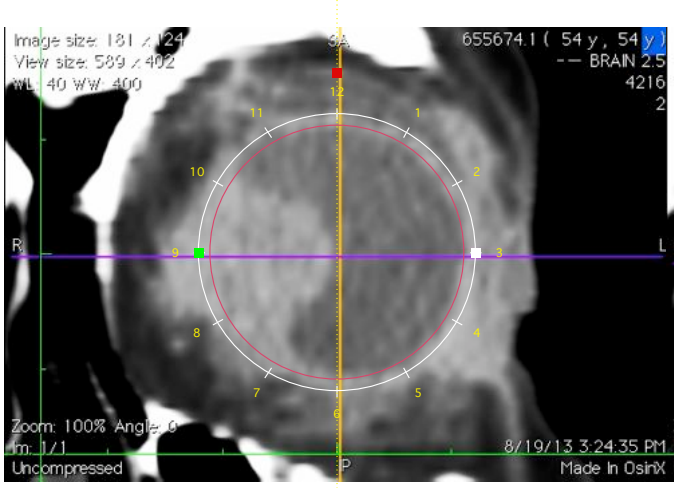
signature date

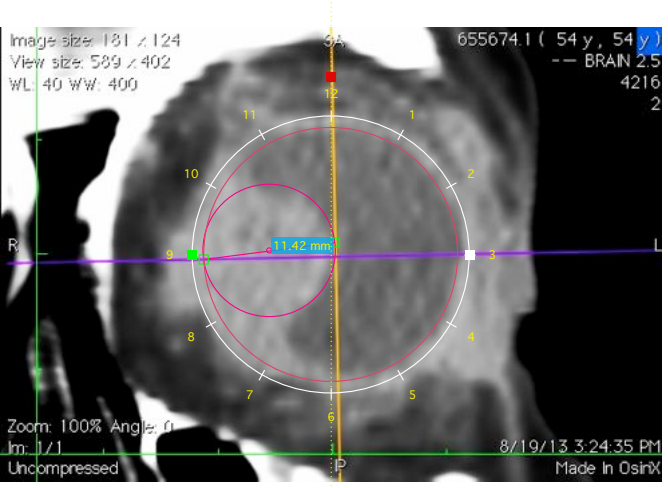


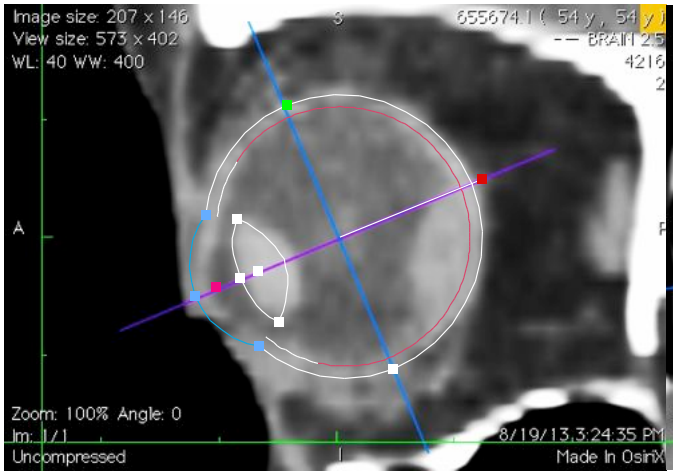
Plaque Simulator Treatment Plan

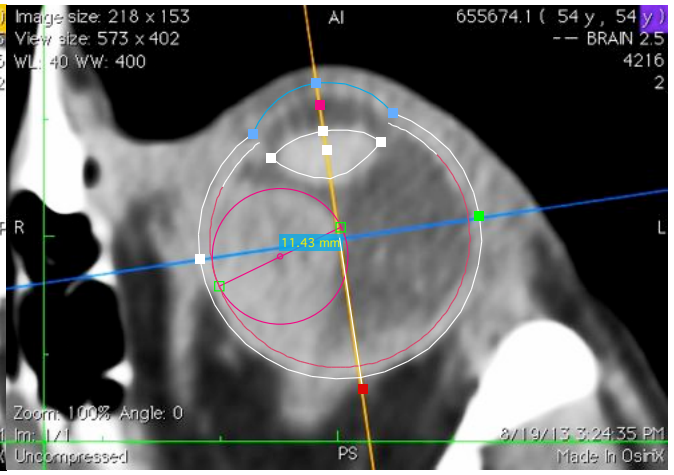








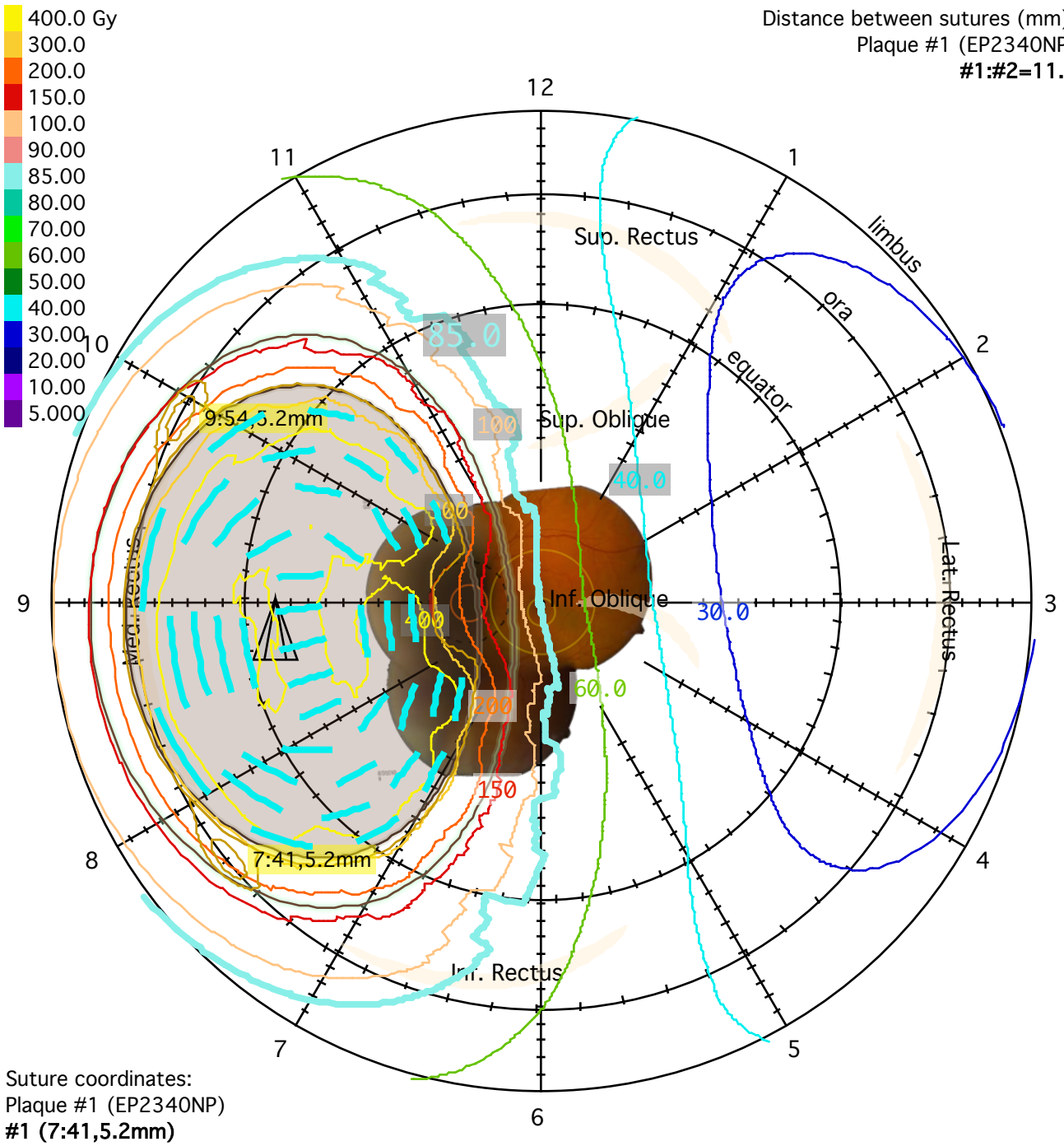




Pt:Big Tumor Tutorial, Left eye, DOB: Oct 31, 1952, M, T=168.00 hrs, PREPLAN

Plaque Simulator Retinal Diagram

Rx plaque:	1 (EP2340NP)
Dose matrix set:	1 (retinal surface)
Prescribed (Rx) dose:	85.00 Gy to Tumor 1 Apex @ 11.40 mm
Dose matrix max:	590.85 Gy



Suture coordinates:
Plaque #1 (EP2340NP)
#1 (7:41,5.2mm)
#2 (9:54,5.2mm)

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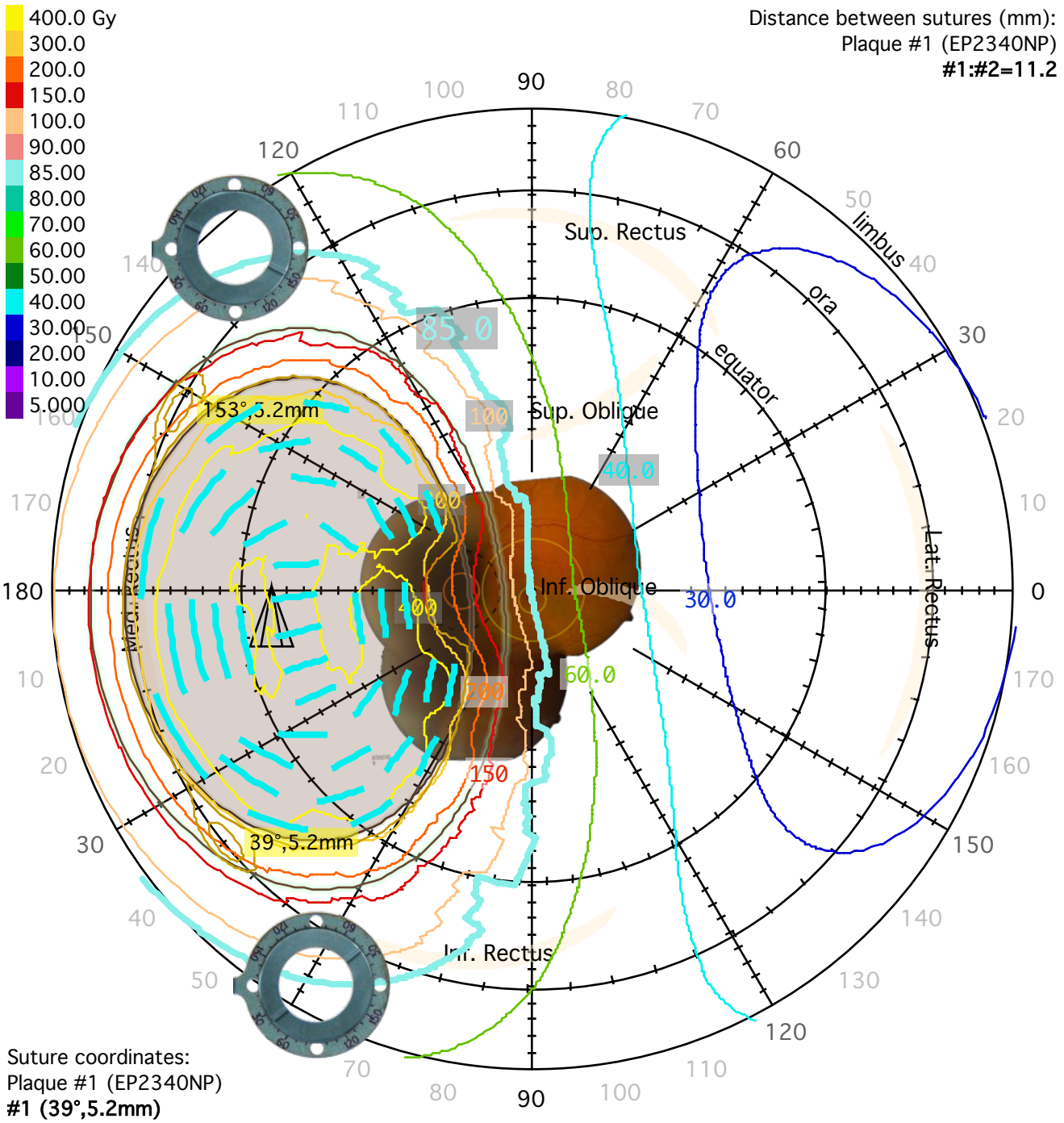

Suture coordinates:
Plaque #1 (EP2340NP)
#1 (39°,5.2mm)
#2 (153°,5.2mm)

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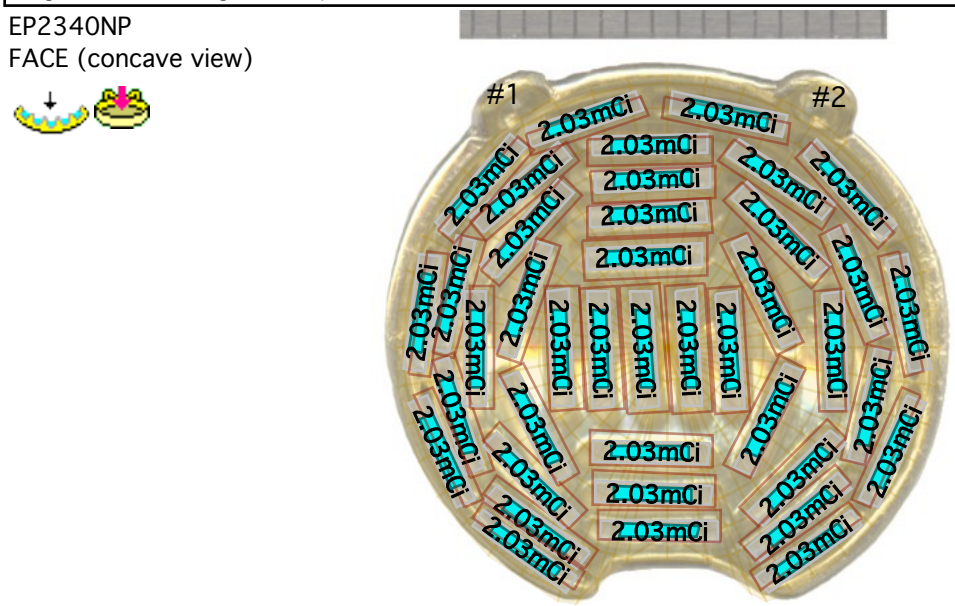
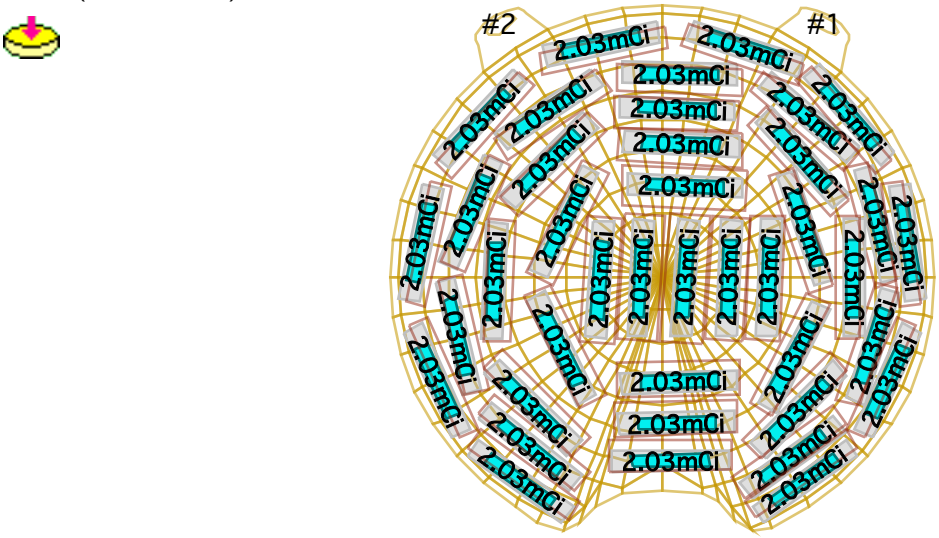
Plaque Simulator Loading Diagram

Radionuclide source summary:	
Plaque #:	1
Plaque name:	EP2340NP
Radionuclide:	I-125 (IAI-125A)
Inventory name:	Big Tumor Tutorial
Number of sources:	40
Assay date:	7/2/14
Avg. (total) strength @ assay:	2.03 mCi (81.23 mCi)
Avg. (total) strength @ implant:	2.03 mCi (81.23 mCi)

EP2340NP
FACE (concave view)



EP2340NP
BACK (convex view)



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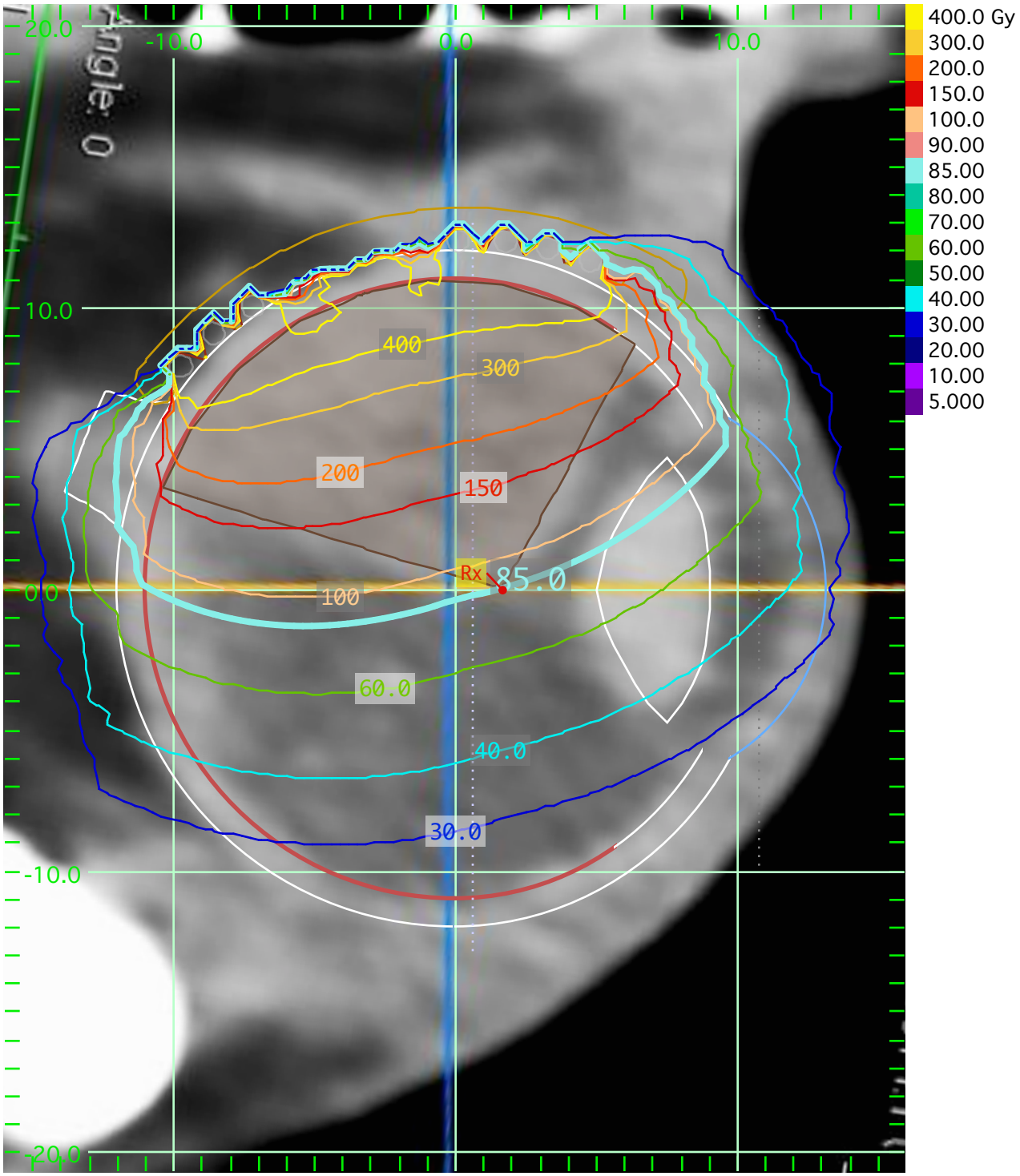
Plaque Simulator Isodose Plot

Markers	1 mm
Prescribed (Rx) dose	85.00 Gy to Tumor 1 Apex @ 11.40 mm
Dose matrix set	1
Meridian plane longitudes	275.7° & 95.7°
Dose matrix maximum	3650.55 Gy



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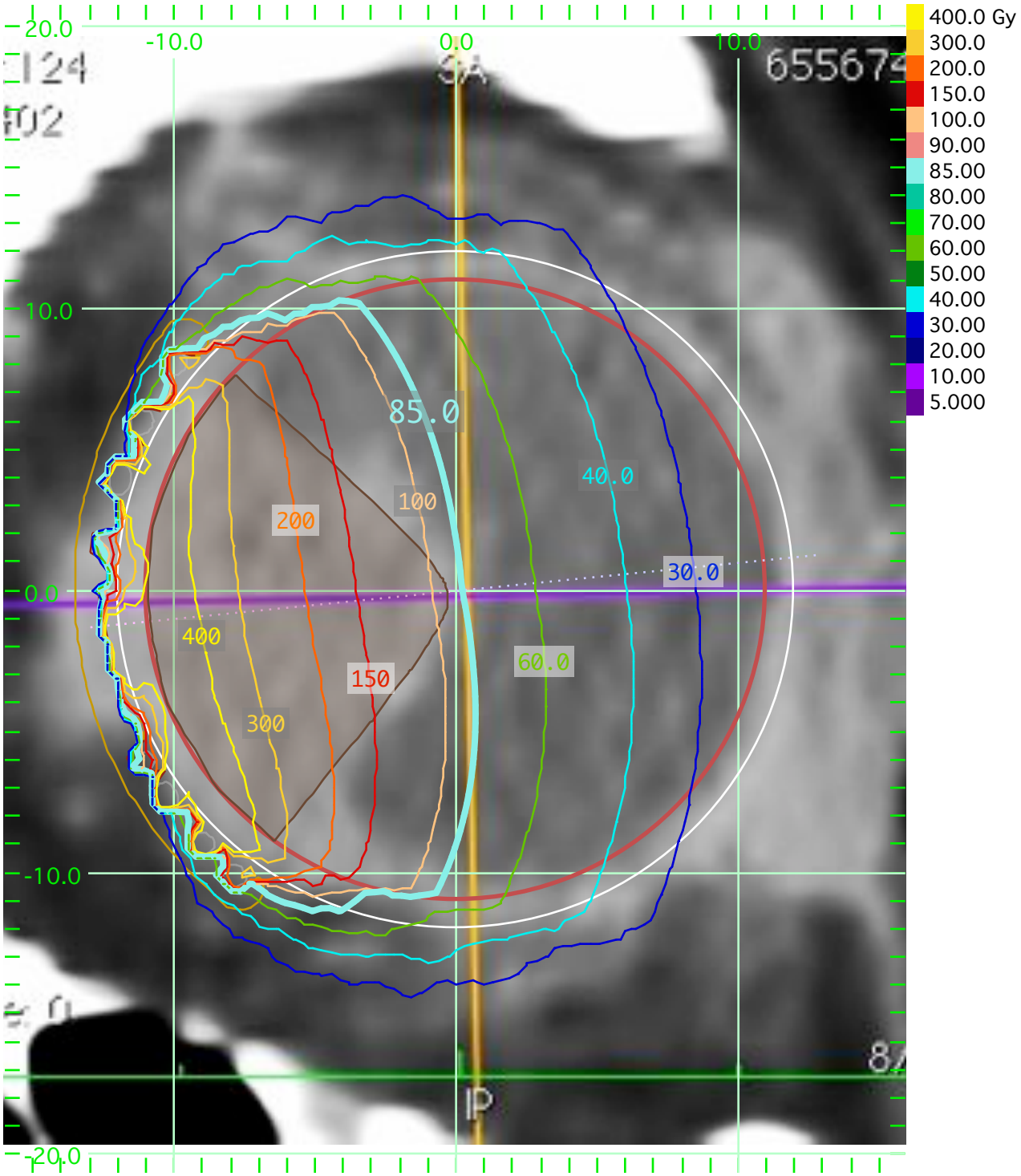
Plaque Simulator Isodose Plot

Markers	1 mm
Prescribed (Rx) dose	85.00 Gy to Tumor 1 Apex @ 11.40 mm
Dose matrix set	1
Equatorial plane offset	0.6 mm
Dose matrix maximum	2250.44 Gy



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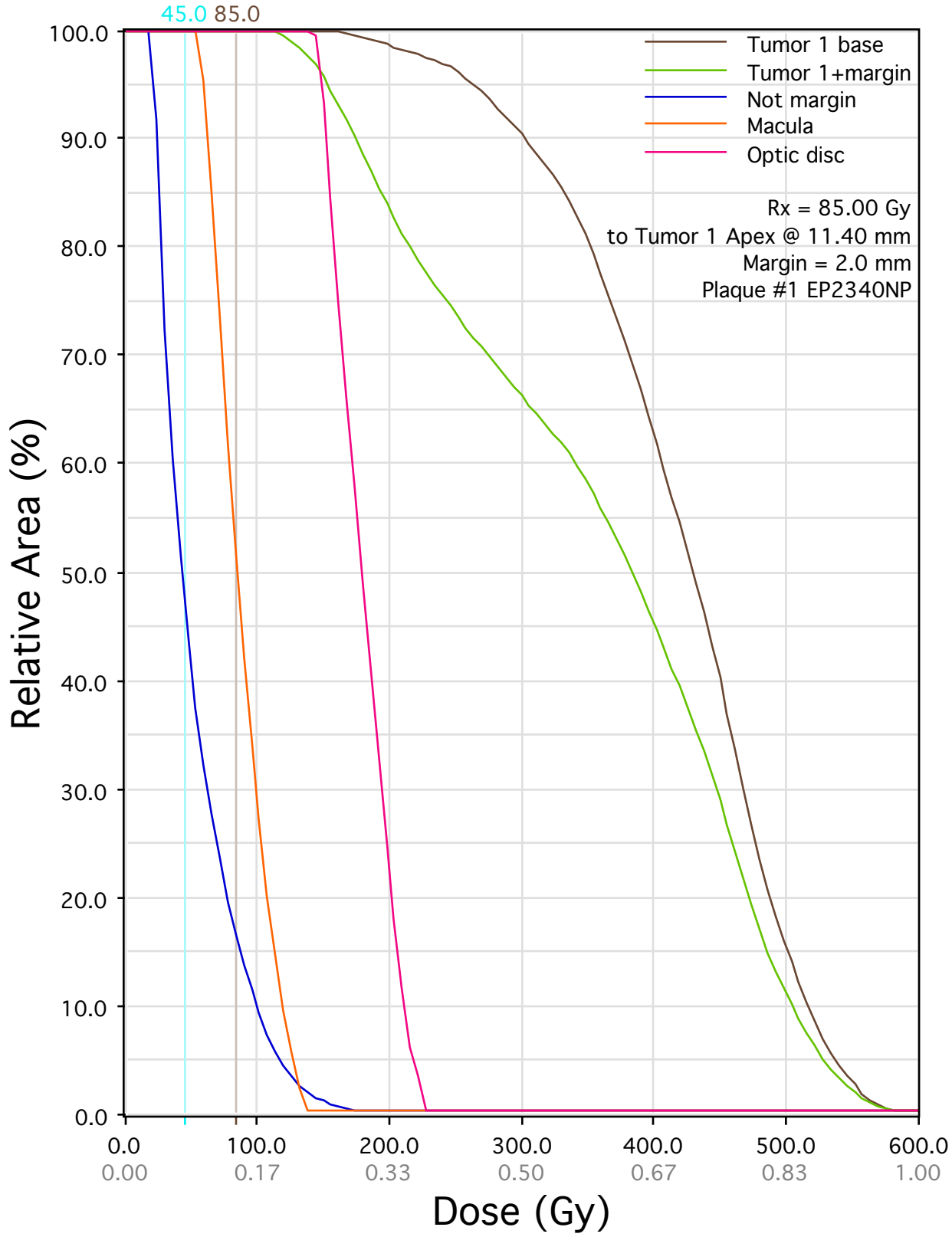
Plaque Simulator Retina Dose-Area Histogram



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Plaque Simulator QA Check (isotropic point source in water)

Plaque #1 EP2340NP, implant 7/2/14 for T = 168.00 hours
Tavg (hours) = 1.443 x 24.0 x half-life(in days)
r = distance from source center to QA point on plaque CAX at (6.0,0.0,0.0)
Dose (Gy) = Strength {x ActivityToSk} x Tavg x DoseRateConstant x (1 - exp(-T/Tavg)) x (1/r^2) x g(r)

S#	Model	Strength @implant	Activity to Sk	Tavg hours	Dose-Rate Constant	X mm	Y mm	Z mm	r mm	g(r)	Dose Gy	Check by
1	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	-0.047	-2.583	-0.036	6.575	1.041	9.824	____
2	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	-0.269	-0.904	-0.032	6.334	1.043	10.614	____
3	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	-0.274	0.835	-0.015	6.329	1.043	10.630	____
4	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.513	5.136	-6.573	9.041	1.013	5.056	____
5	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.441	7.930	-2.274	8.985	1.013	5.123	____
6	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.159	7.447	2.564	8.763	1.016	5.400	____
7	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.159	4.404	6.530	8.763	1.016	5.400	____
8	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.201	-0.691	7.903	8.796	1.016	5.358	____
9	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.586	-5.665	6.247	9.098	1.012	4.991	____
10	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.735	-8.354	2.098	9.211	1.011	4.862	____
11	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.735	-8.192	-2.662	9.211	1.011	4.862	____
12	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	2.735	-5.063	-6.968	9.211	1.011	4.862	____
13	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.636	-0.310	-7.094	8.335	1.021	5.999	____
14	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.636	5.021	-5.021	8.335	1.021	5.999	____
15	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.280	6.495	-0.113	8.030	1.024	6.484	____
16	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.179	4.384	4.540	7.942	1.025	6.635	____
17	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.326	-0.573	6.553	8.070	1.024	6.418	____
18	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.661	-5.430	4.637	8.355	1.021	5.968	____
19	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.839	-7.415	-0.000	8.503	1.019	5.752	____
20	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	1.813	-5.306	-5.124	8.482	1.019	5.782	____
21	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.855	-0.553	-5.636	7.651	1.029	7.173	____
22	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.482	3.916	-2.742	7.301	1.033	7.906	____
23	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.330	3.778	2.181	7.154	1.034	8.248	____
24	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.665	-0.729	5.185	7.475	1.031	7.530	____
25	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.956	-5.554	1.912	7.742	1.028	6.997	____
26	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.987	-5.089	-3.058	7.770	1.027	6.945	____
27	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.344	-0.640	-4.038	6.979	1.036	8.685	____
28	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	-0.077	2.422	-0.085	6.543	1.041	9.925	____
29	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.215	-0.887	3.557	6.849	1.038	9.030	____
30	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	0.351	-4.110	-0.000	6.986	1.036	8.665	____
31	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.692	5.536	-7.891	9.912	1.001	4.161	____
32	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.692	8.768	-4.004	9.912	1.001	4.161	____
33	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.525	9.379	1.348	9.793	1.003	4.270	____
34	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.426	7.086	6.140	9.722	1.004	4.336	____
35	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.442	2.368	9.089	9.734	1.004	4.325	____
36	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.525	-3.241	8.904	9.793	1.003	4.270	____
37	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.692	-7.285	6.312	9.912	1.001	4.161	____
38	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.692	-9.541	1.372	9.912	1.001	4.161	____
39	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.692	-8.768	-4.004	9.912	1.001	4.161	____
40	IAAI	2.031mCi	1.27U/mCi	2057.14	0.981	3.692	-5.543	-7.886	9.912	1.001	4.161	____
					QA_Point	Dose =	233.00		QA_Check Point /	Dose = Check =	249.29 0.93	____

EP2340NP

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Plaque Simulator Setup