

Dose to Organs at Risk in non-optimal LDR seed implant for _____.

Attached are the DVHs for pre and post operative procedures. Thought the gland dose was too low to be considered not reportable, the dose to organs at risk was not changed to any alarming level. I created a structure called "normal tissue" Which comprised a 5mm margin around the prostate. As can be seen on the pre and post DVHs, and the chart below, maximum doses to this region were not out of tolerance.

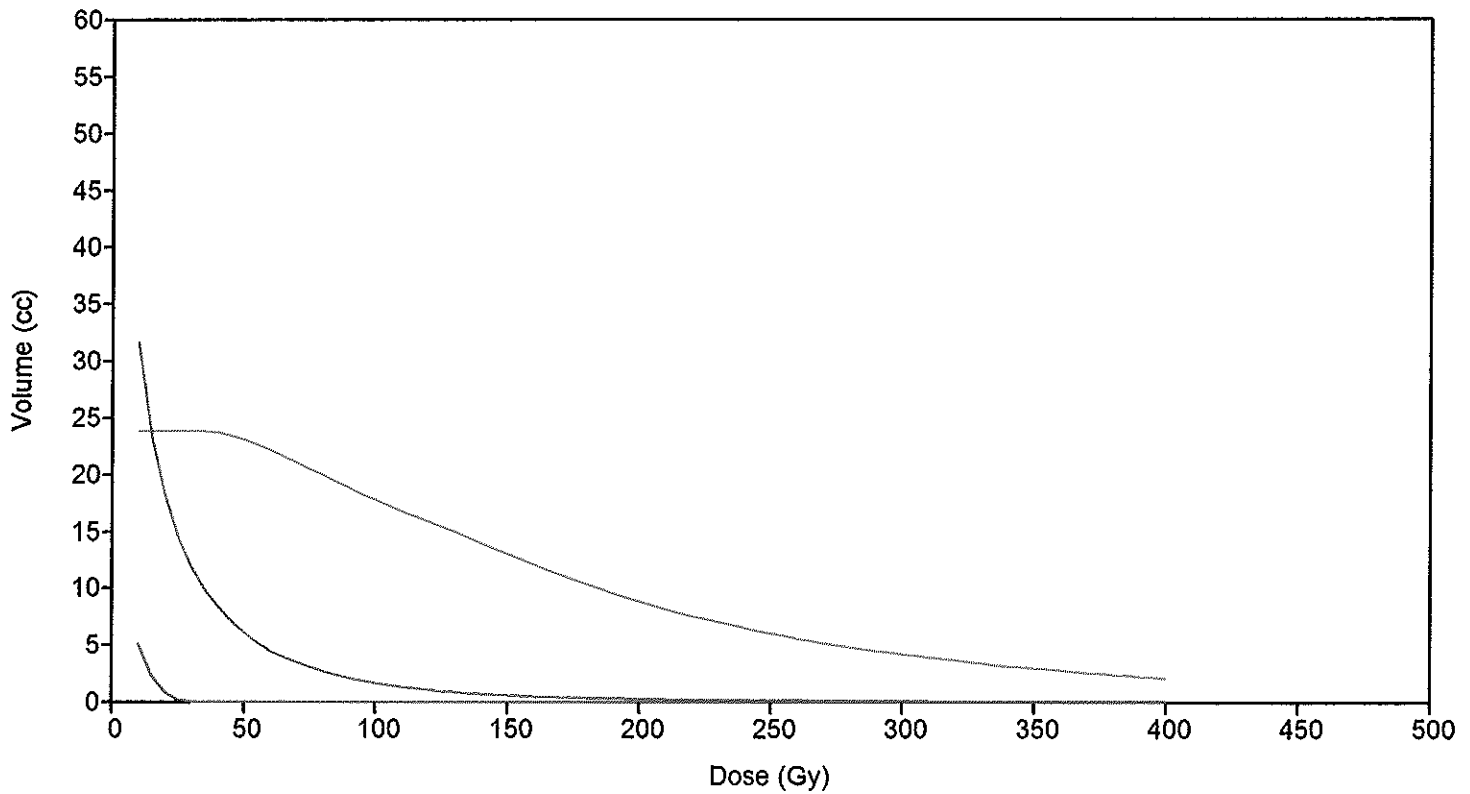
	Expected	Received
Bladder	2% @ 230Gy	2% @ 95Gy
Rectum	5% @ 135Gy	5% @ 20Gy
Normal Tissue	10% @ 385Gy	10% @ 360 Gy

VariSeed: DVH Report [Page 2]

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Name: [REDACTED] PID: 52988 Dept. ID:	Study: Post-Op Variation: Steve Post Images: 32	Source: Pd-103 (2335) Comment: Sources: 63 Anisotropy: Factors (Line Model) Source Activity: 2.600 U [2.011 mCi]
Procedure Date: 4/1/2011	Prescription Dose: 125.0 Gy	Total Activity: 163.800 U [126.682 mCi]

Cumulative DVH



— Prostate	— Bladder
— Rectum	— Normal Tissue

Cumulative DVH

Dose		Prostate		Bladder		Rectum		Normal Tissue	
Gy	%	cc	%	cc	%	cc	%	cc	%
10.00	8.00	23.82	100.00	31.64	31.81	5.15	27.29	53.82	100.00
15.00	12.00	23.82	100.00	23.28	23.41	2.37	12.57	53.82	100.00
20.00	16.00	23.82	100.00	18.20	18.30	0.91	4.84	53.78	99.94
25.00	20.00	23.82	100.00	14.59	14.67	0.23	1.23	53.19	98.84
30.00	24.00	23.82	100.00	11.90	11.96	0.04	0.23	52.02	96.67
35.00	28.00	23.81	99.96	9.92	9.98	0.00	0.01	50.76	94.32
40.00	32.00	23.69	99.45	8.36	8.41	0.00	0.00	49.31	91.64
45.00	36.00	23.43	98.37	7.15	7.19	0.00	0.00	47.93	89.06

VariSeed: DVH Report [Page 3]

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Procedure Date: 4/1/2011	Prescription Dose: 126.0 Gy	

Cumulative DVH

Dose		Prostate		Bladder		Rectum		Normal Tissue	
Gy	%	cc	%	cc	%	cc	%	cc	%
50.00	40.00	23.06	96.79	6.14	6.18	0.00	0.00	46.51	86.43
55.00	44.00	22.62	94.97	5.25	5.28	0.00	0.00	45.08	83.77
60.00	48.00	22.16	93.00	4.52	4.54	0.00	0.00	43.71	81.22
65.00	52.00	21.59	90.65	4.00	4.02	0.00	0.00	42.35	78.70
70.00	56.00	21.04	88.31	3.55	3.57	0.00	0.00	40.93	76.06
75.00	60.00	20.50	86.05	3.14	3.16	0.00	0.00	39.65	73.68
80.00	64.00	19.96	83.79	2.75	2.76	0.00	0.00	38.35	71.27
85.00	68.00	19.39	81.38	2.42	2.43	0.00	0.00	37.04	68.84
90.00	72.00	18.83	79.04	2.14	2.15	0.00	0.00	35.69	66.33
95.00	76.00	18.25	76.62	1.92	1.93	0.00	0.00	34.51	64.14
100.00	80.00	17.77	74.59	1.70	1.71	0.00	0.00	33.34	61.95
105.00	84.00	17.27	72.49	1.52	1.53	0.00	0.00	32.21	59.85
110.00	88.00	16.78	70.45	1.34	1.34	0.00	0.00	31.19	57.95
115.00	92.00	16.34	68.58	1.22	1.22	0.00	0.00	30.19	56.10
120.00	96.00	15.89	66.69	1.10	1.11	0.00	0.00	29.15	54.17
125.00	100.00	15.42	64.72	0.97	0.98	0.00	0.00	28.22	52.45
130.00	104.00	14.95	62.76	0.90	0.90	0.00	0.00	27.27	50.67
135.00	108.00	14.48	60.80	0.80	0.81	0.00	0.00	26.37	49.00
140.00	112.00	13.98	58.68	0.72	0.73	0.00	0.00	25.43	47.25
145.00	116.00	13.47	56.55	0.67	0.67	0.00	0.00	24.54	45.60
150.00	120.00	12.99	54.53	0.60	0.60	0.00	0.00	23.62	43.88
155.00	124.00	12.54	52.65	0.54	0.55	0.00	0.00	22.78	42.34
160.00	128.00	12.08	50.69	0.50	0.50	0.00	0.00	22.00	40.89
165.00	132.00	11.58	48.63	0.45	0.45	0.00	0.00	21.24	39.48
170.00	136.00	11.19	46.96	0.43	0.43	0.00	0.00	20.48	38.06
175.00	140.00	10.74	45.09	0.40	0.40	0.00	0.00	19.82	36.84
180.00	144.00	10.36	43.47	0.38	0.38	0.00	0.00	19.13	35.56
185.00	148.00	9.94	41.72	0.36	0.36	0.00	0.00	18.48	34.34
190.00	152.00	9.56	40.15	0.34	0.34	0.00	0.00	17.81	33.09
195.00	156.00	9.19	38.60	0.32	0.32	0.00	0.00	17.20	31.96
200.00	160.00	8.85	37.13	0.30	0.30	0.00	0.00	16.56	30.77
205.00	164.00	8.50	35.69	0.28	0.28	0.00	0.00	15.97	29.67
210.00	168.00	8.18	34.33	0.26	0.26	0.00	0.00	15.46	28.73
215.00	172.00	7.84	32.92	0.24	0.24	0.00	0.00	14.93	27.73
220.00	176.00	7.57	31.76	0.23	0.23	0.00	0.00	14.42	26.79
225.00	180.00	7.32	30.73	0.21	0.21	0.00	0.00	14.02	26.05
230.00	184.00	7.06	29.63	0.20	0.20	0.00	0.00	13.53	25.14
235.00	188.00	6.79	28.51	0.18	0.18	0.00	0.00	13.10	24.35

VariSeed: DVH Report [Page 4]

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Procedure Date: 4/1/2011	Prescription Dose: 125.0 Gy	

Cumulative DVH

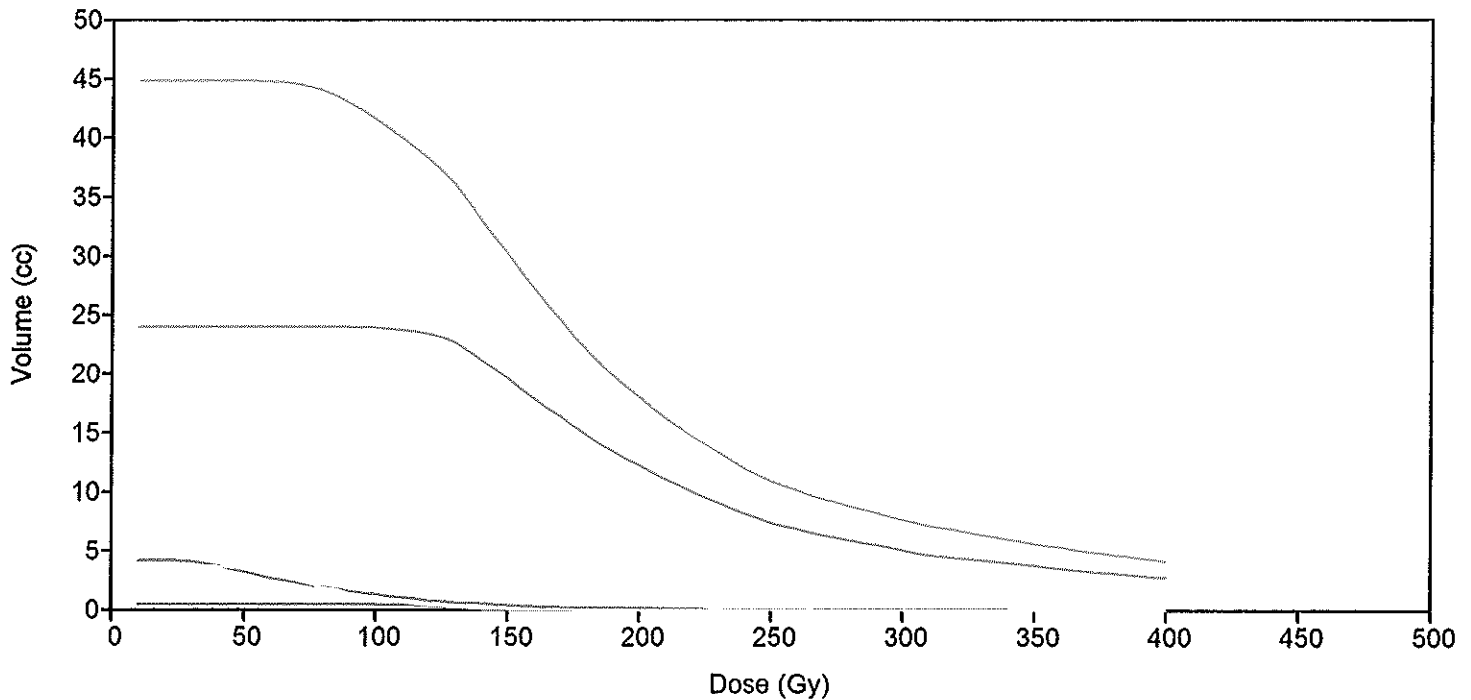
Dose		Prostate		Bladder		Rectum		Normal Tissue	
Gy	%	cc	%	cc	%	cc	%	cc	%
240.00	192.00	6.51	27.35	0.17	0.17	0.00	0.00	12.64	23.48
245.00	196.00	6.25	26.23	0.16	0.17	0.00	0.00	12.20	22.68
250.00	200.00	6.03	25.33	0.16	0.16	0.00	0.00	11.80	21.93
255.00	204.00	5.83	24.49	0.15	0.15	0.00	0.00	11.40	21.18
260.00	208.00	5.60	23.51	0.15	0.15	0.00	0.00	11.01	20.46
265.00	212.00	5.40	22.66	0.15	0.15	0.00	0.00	10.62	19.74
270.00	216.00	5.19	21.78	0.14	0.14	0.00	0.00	10.28	19.11
275.00	220.00	5.00	20.99	0.13	0.13	0.00	0.00	9.99	18.57
280.00	224.00	4.83	20.27	0.13	0.13	0.00	0.00	9.71	18.04
285.00	228.00	4.69	19.68	0.13	0.13	0.00	0.00	9.42	17.50
290.00	232.00	4.51	18.91	0.12	0.12	0.00	0.00	9.14	16.97
295.00	236.00	4.37	18.35	0.12	0.12	0.00	0.00	8.85	16.44
300.00	240.00	4.23	17.77	0.11	0.11	0.00	0.00	8.54	15.86
305.00	244.00	4.09	17.18	0.10	0.10	0.00	0.00	8.28	15.38
310.00	248.00	3.97	16.65	0.09	0.09	0.00	0.00	8.02	14.91
315.00	252.00	3.81	16.01	0.08	0.08	0.00	0.00	7.77	14.44
320.00	256.00	3.69	15.49	0.08	0.08	0.00	0.00	7.57	14.06
325.00	260.00	3.56	14.94	0.08	0.08	0.00	0.00	7.30	13.57
330.00	264.00	3.41	14.32	0.07	0.07	0.00	0.00	7.12	13.22
335.00	268.00	3.28	13.78	0.07	0.07	0.00	0.00	6.88	12.78
340.00	272.00	3.16	13.27	0.06	0.06	0.00	0.00	6.68	12.42
345.00	276.00	3.09	12.97	0.06	0.06	0.00	0.00	6.49	12.07
350.00	280.00	3.01	12.62	0.06	0.06	0.00	0.00	6.35	11.81
355.00	284.00	2.91	12.20	0.05	0.05	0.00	0.00	6.16	11.45
360.00	288.00	2.79	11.73	0.05	0.05	0.00	0.00	6.00	11.15
365.00	292.00	2.69	11.31	0.05	0.05	0.00	0.00	5.83	10.84
370.00	296.00	2.61	10.96	0.05	0.05	0.00	0.00	5.65	10.50
375.00	300.00	2.51	10.55	0.05	0.05	0.00	0.00	5.47	10.17
380.00	304.00	2.42	10.17	0.05	0.05	0.00	0.00	5.30	9.85
385.00	308.00	2.34	9.83	0.04	0.04	0.00	0.00	5.19	9.65
390.00	312.00	2.26	9.50	0.04	0.04	0.00	0.00	5.04	9.37
395.00	316.00	2.18	9.15	0.04	0.04	0.00	0.00	4.90	9.11
400.00	320.00	2.08	8.74	0.04	0.04	0.00	0.00	4.74	8.81

VariSeed: DVH Report [Page 4]

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Procedure Date: 2/18/2011	Prescription Dose: 125.0 Gy	

Cumulative DVH



Prostate	Bladder
Urethra	Rectum
normal tissue	

Cumulative DVH

Dose		Prostate		Bladder		Urethra		Rectum		normal tissue	
Gy	%	cc	%	cc	%	cc	%	cc	%	cc	%
10.00	8.00	23.97	100.00	4.16	100.00	0.48	100.00	3.71	100.00	44.87	100.00
15.00	12.00	23.97	100.00	4.16	100.00	0.48	100.00	3.71	100.00	44.87	100.00
20.00	16.00	23.97	100.00	4.16	100.00	0.48	100.00	3.71	100.00	44.87	100.00
25.00	20.00	23.97	100.00	4.16	100.00	0.48	100.00	3.71	100.00	44.87	100.00
30.00	24.00	23.97	100.00	4.11	98.76	0.48	100.00	3.71	99.98	44.87	100.00
35.00	28.00	23.97	100.00	3.95	94.78	0.48	100.00	3.70	99.67	44.87	100.00
40.00	32.00	23.97	100.00	3.72	89.42	0.48	100.00	3.67	98.83	44.87	100.00
45.00	36.00	23.97	100.00	3.47	83.39	0.48	100.00	3.62	97.45	44.87	100.00

VariSeed: DVH Report [Page 5]

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Procedure Date: 2/18/2011	Prescription Dose: 125.0 Gy	

Cumulative DVH

Dose		Prostate		Bladder		Urethra		Rectum		normal tissue	
Gy	%	cc	%	cc	%	cc	%	cc	%	cc	%
50.00	40.00	23.97	100.00	3.23	77.61	0.48	100.00	3.52	94.74	44.87	100.00
55.00	44.00	23.97	100.00	3.01	72.27	0.48	100.00	3.33	89.72	44.84	99.93
60.00	48.00	23.97	100.00	2.70	64.80	0.48	100.00	3.13	84.19	44.82	99.89
65.00	52.00	23.97	100.00	2.56	61.60	0.48	100.00	2.82	76.07	44.74	99.71
70.00	56.00	23.97	100.00	2.33	55.89	0.48	100.00	2.53	68.26	44.60	99.40
75.00	60.00	23.97	100.00	2.13	51.26	0.48	100.00	2.28	61.34	44.34	98.81
80.00	64.00	23.97	100.00	1.93	46.46	0.48	100.00	1.91	51.35	44.01	98.08
85.00	68.00	23.97	100.00	1.81	43.41	0.48	100.00	1.73	46.71	43.54	97.03
90.00	72.00	23.97	100.00	1.61	38.70	0.48	100.00	1.43	38.46	42.94	95.70
95.00	76.00	23.94	99.85	1.45	34.80	0.48	100.00	1.23	33.06	42.30	94.27
100.00	80.00	23.89	99.66	1.34	32.10	0.47	98.93	1.08	29.02	41.52	92.54
105.00	84.00	23.81	99.31	1.22	29.21	0.46	96.00	0.89	24.01	40.78	90.88
110.00	88.00	23.70	98.86	1.07	25.79	0.45	93.65	0.72	19.44	39.96	89.05
115.00	92.00	23.60	98.42	0.96	23.02	0.42	87.83	0.57	15.23	39.12	87.19
120.00	96.00	23.37	97.47	0.84	20.12	0.36	74.76	0.45	12.05	38.17	85.08
125.00	100.00	23.09	96.32	0.75	18.11	0.34	71.16	0.37	9.85	37.21	82.94
130.00	104.00	22.66	94.51	0.67	16.17	0.27	57.13	0.28	7.61	36.02	80.28
135.00	108.00	21.92	91.43	0.61	14.66	0.11	23.44	0.22	5.87	34.52	76.94
140.00	112.00	21.16	88.24	0.57	13.76	0.04	9.36	0.14	3.72	32.99	73.53
145.00	116.00	20.38	85.02	0.51	12.15	0.02	4.04	0.12	3.25	31.50	70.20
150.00	120.00	19.61	81.79	0.45	10.73	0.00	0.97	0.09	2.49	30.14	67.17
155.00	124.00	18.69	77.94	0.38	9.02	0.00	0.60	0.07	1.77	28.62	63.78
160.00	128.00	17.90	74.64	0.33	7.87	0.00	0.00	0.06	1.66	27.23	60.69
165.00	132.00	17.09	71.27	0.29	6.99	0.00	0.00	0.05	1.33	25.80	57.50
170.00	136.00	16.41	68.46	0.25	6.09	0.00	0.00	0.04	1.20	24.62	54.87
175.00	140.00	15.54	64.82	0.23	5.56	0.00	0.00	0.03	0.91	23.20	51.71
180.00	144.00	14.79	61.70	0.22	5.33	0.00	0.00	0.03	0.72	22.02	49.07
185.00	148.00	14.06	58.63	0.21	4.99	0.00	0.00	0.02	0.53	20.82	46.40
190.00	152.00	13.47	56.19	0.20	4.69	0.00	0.00	0.01	0.38	19.90	44.35
195.00	156.00	12.82	53.48	0.18	4.24	0.00	0.00	0.01	0.23	18.94	42.21
200.00	160.00	12.24	51.07	0.16	3.90	0.00	0.00	0.01	0.20	18.05	40.22
205.00	164.00	11.64	48.56	0.14	3.44	0.00	0.00	0.01	0.20	17.15	38.22
210.00	168.00	11.07	46.17	0.14	3.39	0.00	0.00	0.01	0.20	16.30	36.32
215.00	172.00	10.58	44.14	0.13	3.17	0.00	0.00	0.01	0.18	15.48	34.51
220.00	176.00	10.04	41.88	0.11	2.53	0.00	0.00	0.01	0.18	14.77	32.91
225.00	180.00	9.55	39.84	0.09	2.25	0.00	0.00	0.01	0.16	14.08	31.37
230.00	184.00	9.08	37.89	0.08	1.93	0.00	0.00	0.01	0.16	13.41	29.88
235.00	188.00	8.65	36.08	0.08	1.93	0.00	0.00	0.01	0.16	12.75	28.42

VariSeed: DVH Report [Page 6]

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240.00	192.00	8.18	34.11	0.07	1.68	0.00	0.00	0.01	0.14	12.05	26.86
245.00	196.00	7.80	32.54	0.07	1.58	0.00	0.00	0.01	0.14	11.51	25.65
250.00	200.00	7.39	30.82	0.06	1.53	0.00	0.00	0.00	0.12	10.94	24.39
255.00	204.00	7.11	29.65	0.06	1.48	0.00	0.00	0.00	0.12	10.55	23.51
260.00	208.00	6.87	28.67	0.06	1.45	0.00	0.00	0.00	0.12	10.19	22.72
265.00	212.00	6.57	27.42	0.06	1.39	0.00	0.00	0.00	0.09	9.78	21.80
270.00	216.00	6.35	26.49	0.06	1.34	0.00	0.00	0.00	0.08	9.45	21.07
275.00	220.00	6.14	25.63	0.06	1.34	0.00	0.00	0.00	0.08	9.18	20.45
280.00	224.00	5.90	24.61	0.06	1.34	0.00	0.00	0.00	0.05	8.84	19.70
285.00	228.00	5.68	23.70	0.05	1.29	0.00	0.00	0.00	0.03	8.58	19.11
290.00	232.00	5.51	22.99	0.05	1.29	0.00	0.00	0.00	0.03	8.28	18.45
295.00	236.00	5.29	22.07	0.05	1.29	0.00	0.00	0.00	0.00	7.98	17.79
300.00	240.00	5.08	21.20	0.05	1.29	0.00	0.00	0.00	0.00	7.72	17.20
305.00	244.00	4.83	20.15	0.05	1.29	0.00	0.00	0.00	0.00	7.43	16.56
310.00	248.00	4.68	19.50	0.05	1.19	0.00	0.00	0.00	0.00	7.16	15.96
315.00	252.00	4.56	19.03	0.04	1.07	0.00	0.00	0.00	0.00	6.97	15.55
320.00	256.00	4.45	18.58	0.04	0.93	0.00	0.00	0.00	0.00	6.81	15.18
325.00	260.00	4.33	18.08	0.04	0.93	0.00	0.00	0.00	0.00	6.60	14.71
330.00	264.00	4.23	17.63	0.04	0.93	0.00	0.00	0.00	0.00	6.41	14.29
335.00	268.00	4.11	17.14	0.03	0.84	0.00	0.00	0.00	0.00	6.22	13.87
340.00	272.00	4.00	16.70	0.03	0.68	0.00	0.00	0.00	0.00	6.01	13.40
345.00	276.00	3.92	16.35	0.03	0.63	0.00	0.00	0.00	0.00	5.86	13.06
350.00	280.00	3.79	15.81	0.02	0.52	0.00	0.00	0.00	0.00	5.66	12.61
355.00	284.00	3.64	15.20	0.02	0.40	0.00	0.00	0.00	0.00	5.50	12.26
360.00	288.00	3.53	14.74	0.01	0.32	0.00	0.00	0.00	0.00	5.34	11.91
365.00	292.00	3.42	14.25	0.01	0.20	0.00	0.00	0.00	0.00	5.17	11.53
370.00	296.00	3.29	13.74	0.01	0.20	0.00	0.00	0.00	0.00	4.99	11.12
375.00	300.00	3.21	13.40	0.01	0.20	0.00	0.00	0.00	0.00	4.89	10.89
380.00	304.00	3.12	13.03	0.01	0.20	0.00	0.00	0.00	0.00	4.73	10.54
385.00	308.00	3.01	12.57	0.01	0.20	0.00	0.00	0.00	0.00	4.59	10.24
390.00	312.00	2.93	12.21	0.01	0.20	0.00	0.00	0.00	0.00	4.46	9.94
395.00	316.00	2.83	11.82	0.01	0.20	0.00	0.00	0.00	0.00	4.32	9.63
400.00	320.00	2.77	11.55	0.01	0.20	0.00	0.00	0.00	0.00	4.20	9.36