



Study Name:	2019 RSS: SBRT Pancreas
Participant Name:	Paul Barry
Participant Email:	paulcbarry81@gmail.com
Participant Role:	dosimetrist
Participant Institution:	Elekta
Created:	Fri Mar 08 2019 23:38:54 GMT+0000
TPS Manufacturer:	CMS, Inc.
TPS Model:	Monaco
Number of Treatment Beams:	2
Radiation Type(s):	Photon
Delivery Type(s):	VMAT

METRIC	RESULT	MIN REQ					IDEAL	PERFORMANCE (PTS)		WEIGHT	
Dose (Gy) covering 95 (%) of the PTV3300	32.923	20	<input checked="" type="checkbox"/>	0p 20	2p 25	18p 30	20p 33	33	<input type="checkbox"/>	GOOD (19.95)	20.00
Volume (%) of the PTV3300 covered by 20 (Gy)	99.986	95	<input checked="" type="checkbox"/>	0p 95	5p 100			100	<input type="checkbox"/>	ACCEPTABLE (4.99)	5.00
Dose (Gy) covering whole GTVP minus 0.03 (cc)	37.924	30	<input checked="" type="checkbox"/>	0p 30	4p 33	5p 35		35	<input checked="" type="checkbox"/>	IDEAL (5.00)	5.00
Dose (Gy) covering 90 (%) of the GTVP	44.000	25	<input checked="" type="checkbox"/>	0p 25	2p 30	20p 33		33	<input checked="" type="checkbox"/>	IDEAL (20.00)	20.00
Dose (Gy) covering 90 (%) of the TVI	38.167	33	<input checked="" type="checkbox"/>	0p 33	10p 35			35	<input checked="" type="checkbox"/>	IDEAL (10.00)	10.00
Conformation Number [33 (Gy), PTV3300]	0.891	0.6	<input checked="" type="checkbox"/>	0p 0.6	2p 0.7	16p 0.8	20p 1	1	<input type="checkbox"/>	GOOD (17.82)	20.00
Structure(s) containing the global max dose point	(5 values)	PTV3300	<input checked="" type="checkbox"/>	4.2p CTV3300			GTVP		<input checked="" type="checkbox"/>	IDEAL (7.00)	7.00
Volume (cc) of the DUODENUM covered by 15 (Gy)	4.850	20	<input checked="" type="checkbox"/>	0p 20	4.8p 9	6p 0		0	<input type="checkbox"/>	GOOD (5.35)	6.00
Volume (cc) of the DUODENUM covered by 20 (Gy)	2.252	10	<input checked="" type="checkbox"/>	0p 10	5.6p 3	7p 0		0	<input type="checkbox"/>	GOOD (5.95)	7.00
Volume (cc) of the DUODENUM covered by 33 (Gy)	0.094	3	<input checked="" type="checkbox"/>	0p 3	6.4p 1	8p 0		0	<input type="checkbox"/>	GOOD (7.85)	8.00
Volume (cc) of the STOMACH covered by 15 (Gy)	3.201	20	<input checked="" type="checkbox"/>	0p 20	4p 9	5p 0		0	<input type="checkbox"/>	GOOD (4.64)	5.00
Volume (cc) of the STOMACH covered by 20 (Gy)	0.225	10	<input checked="" type="checkbox"/>	0p 10	4.8p 3	6p 0		0	<input type="checkbox"/>	GOOD (5.91)	6.00
Volume (cc) of the STOMACH covered by 33 (Gy)	0.000	3	<input checked="" type="checkbox"/>	0p 3	5.6p 1	7p 0		0	<input checked="" type="checkbox"/>	IDEAL (7.00)	7.00
Volume (cc) of the SMALLBOWEL covered by 15 (Gy)	0.097	20	<input checked="" type="checkbox"/>	0p 20	3.2p 9	4p 0		0	<input type="checkbox"/>	GOOD (3.99)	4.00
Volume (cc) of the SMALLBOWEL covered by 20 (Gy)	0.000	10	<input checked="" type="checkbox"/>	0p 10	4p 3	5p 0		0	<input checked="" type="checkbox"/>	IDEAL (5.00)	5.00
Volume (cc) of the SMALLBOWEL covered by 33 (Gy)	0.000	3	<input checked="" type="checkbox"/>	0p 3	4.8p 1	6p 0		0	<input checked="" type="checkbox"/>	IDEAL (6.00)	6.00
Volume (%) of the LIVER covered by 12 (Gy)	1.295	< 50	<input checked="" type="checkbox"/>	0p	< 50			3p	<input checked="" type="checkbox"/>	IDEAL (3.00)	3.00
Volume (%) of the BILATKIDNEY covered by 12 (Gy)	16.206	< 75	<input checked="" type="checkbox"/>	0p	< 75			3p	<input checked="" type="checkbox"/>	IDEAL (3.00)	3.00
Volume (cc) of the SPINALCORD covered by 20 (Gy)	0.000	< 1	<input checked="" type="checkbox"/>	0p	< 1			3p	<input checked="" type="checkbox"/>	IDEAL (3.00)	3.00
Cumulative meterset over all treatment beams	3741.772	---		---				---	---		---
Estimated 'beam-on' time, all beams (minutes)		---		---				---	---		---
TOTALS		19 (of 19)						10 (of 19)	145.45		150.00

## ----- PATIENT DATA SUMMARY -----

## RT PLAN: Yes

Patient Name: ASM\_PANCREAS\_2019\_Final

Patient ID: ASM\_PANCREAS\_2019\_Final

Plan Name: VMAT2

Plan Label: 01\_AVMAT2

Study ID: ASM\_PANCREAS

Patient Position: HeadFirstSupine

Manufacturer: CMS, Inc.

Model Name: Monaco

Number of Beams: 2 [2 treatment, 0 setup, 0 port, 0 other]

Number of Fraction Groups: 1 [5\_Fx]

## RT DOSE: Yes

Patient Name: ASM\_PANCREAS\_2019\_Final

Patient ID: ASM\_PANCREAS\_2019\_Final

Study ID: ASM\_PANCREAS

Patient Position (Derived): HeadFirstSupine

Patient Position (Requested): HeadFirstSupine

Manufacturer: CMS, Inc.

Model Name: Monaco

Global Max Dose (Gy): 55.27982

X (mm): -224.0 to 226.0 step 2.0

Y (mm): -98.0 to 134.0 step 2.0

Z (mm): -178.0 to 130.0 step 2.0

DICOM Origin (mm): (-2.90, 23.40, -40.00)

## RT STRUCTURE SET: Yes

Patient Name: ASM\_PANCREAS\_2019\_Final

Patient ID: ASM\_PANCREAS\_2019\_Final

Structure Set Label: RTstruct

Study ID: ASM\_PANCREAS

Patient Position (Requested): HeadFirstSupine

Number of Structures: 21 [21 contour-based, 0 points]

## IMAGE SET: Yes

Patient Name: ASM\_PANCREAS\_2019\_Final

Patient ID: ASM\_PANCREAS\_2019\_Final

Study ID: ASM\_PANCREAS

Patient Position (Derived): HeadFirstSupine

Patient Position (Requested): HeadFirstSupine

Modality: ComputedTomography

Axial Slices: 117 [2 mm spacing]

----- DICOM Alerts -----

Inconsistency in Plan <-> Structure Set:

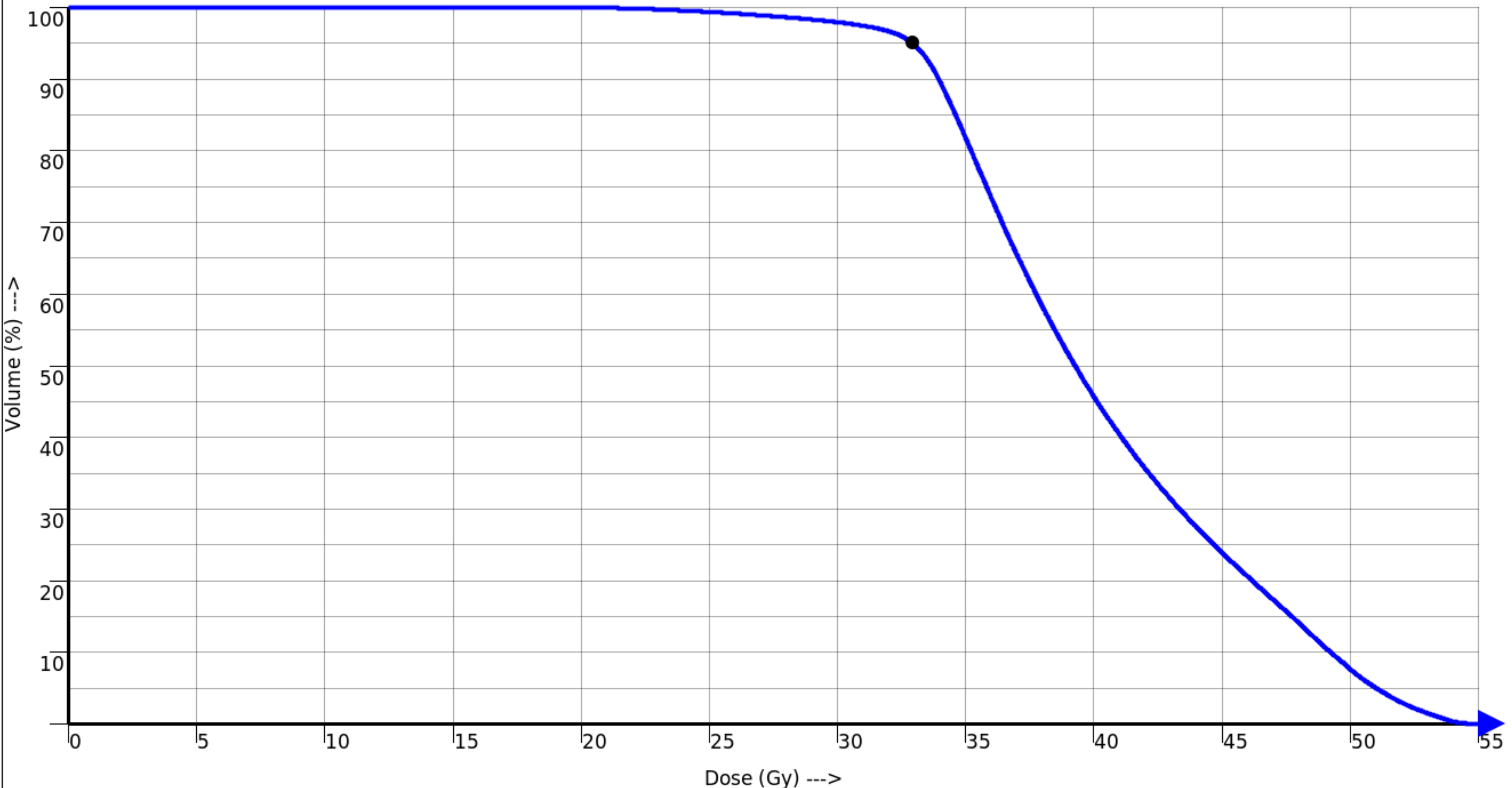
The current RT Plan does not reference the SOP Instance UID of the current RT Structure Set.

BEAM [#] NAME	MACHINE	MODALITY	ENERGY	METERSET	BEAM-ON TIME (Est.)
[1] 1	VersaHD	VMAT	10 MV	1908.575 MU	Invalid Dose Rate
[2] 2	VersaHD	VMAT	10 MV	1833.197 MU	Invalid Dose Rate
				3741.772 (TOTAL)	N/A (TOTAL)

BEAM [#] NAME	ISOCENTER	GEOMETRY	MODIFIERS
[1] 1	0, 0, 0 (DICOM -2.9, 23.4, -40)	Gantry (Dynamic CW and CCW): 180 to 180, Collimator: 0, Cobalt-60 MLC (X)	Johns Hopkins
[2] 2	0, 0, 0 (DICOM -2.9, 23.4, -40)	Gantry (Dynamic CW and CCW): 185.4 to 180, Collimator: 90, Jawless MLC (X)	Johns Hopkins

METRIC	RESULT	MIN REQ						IDEAL	PERFORMANCE (PTS) WEIGHT		
Dose (Gy) covering 95 (%) of the PTV3300	32.923	20	<input checked="" type="checkbox"/>	0p 20	2p 25	18p 30	20p 33	33	<input type="checkbox"/>	GOOD (19.95)	20.00

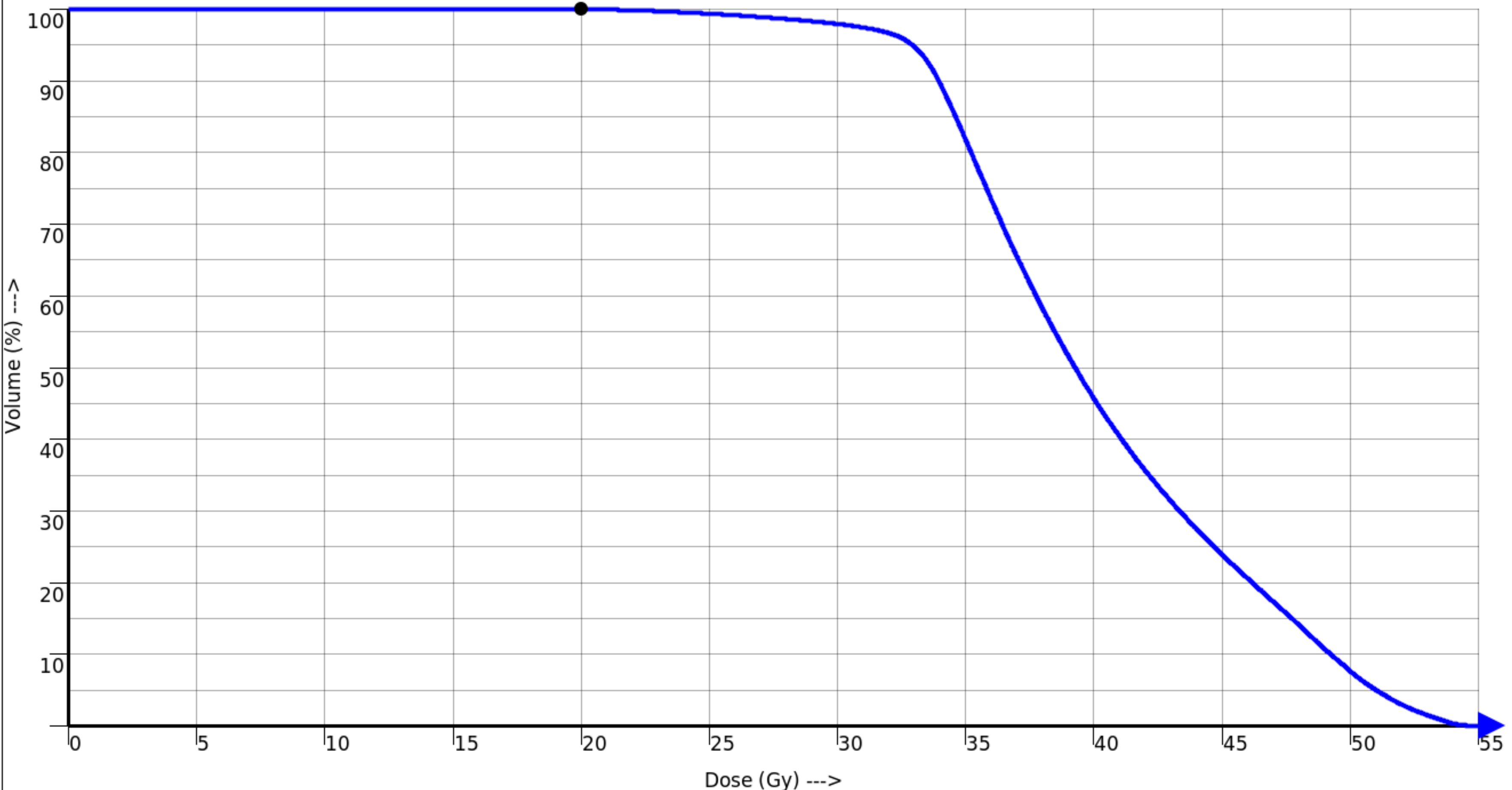
Cumulative DVH: PTV3300 (115.694 cc)  
Min: 16.569 Gy, Mean: 40.349 Gy, Max: 55.280 Gy, Vol: 115.694 cc





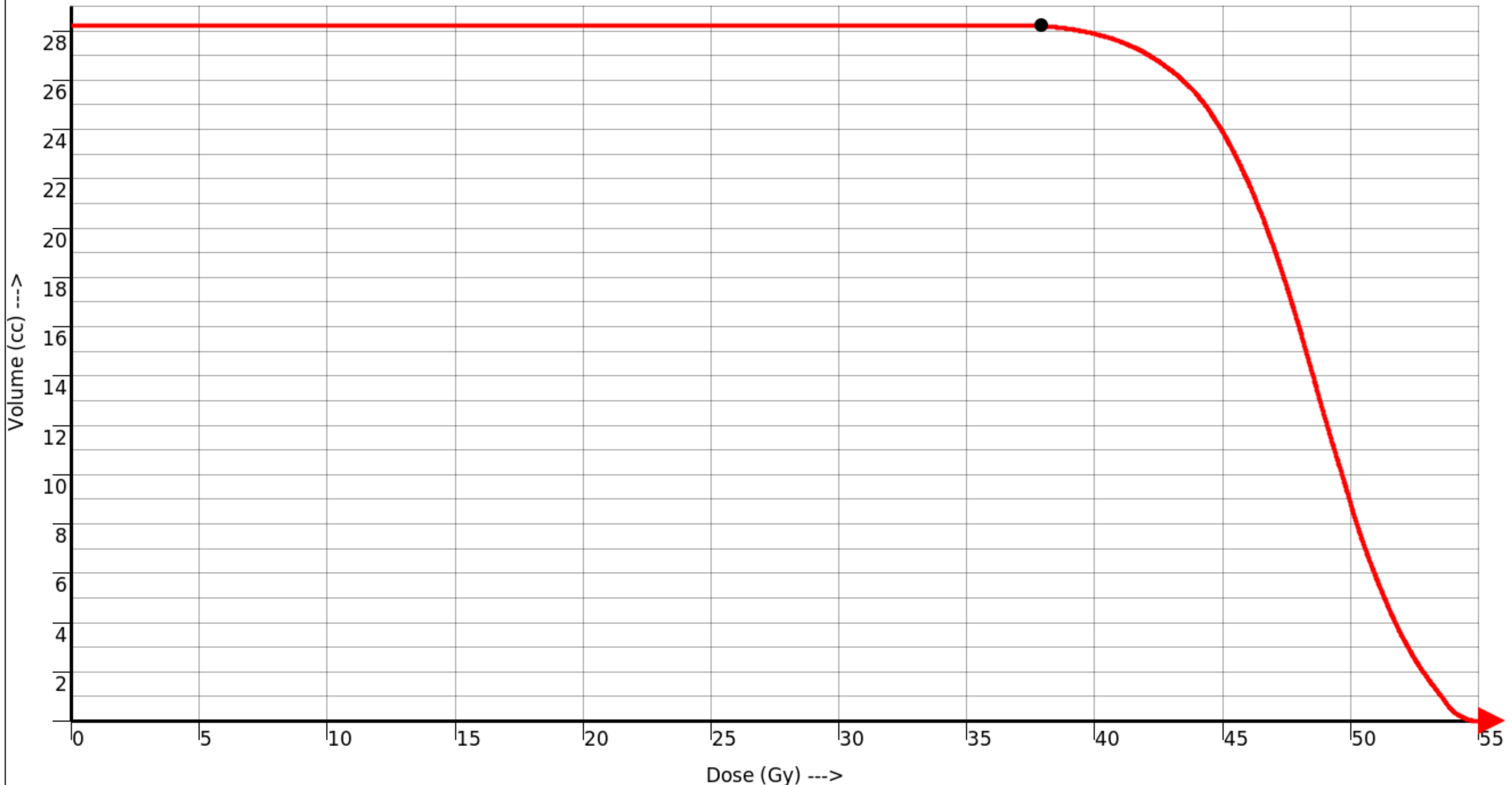
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (%) of the PTV3300 covered by 20 (Gy)	99.986	95 <input checked="" type="checkbox"/>	100 <input type="checkbox"/>	ACCEPTABLE (4.99)	5.00

Cumulative DVH: PTV3300 (115.694 cc)  
Min: 16.569 Gy, Mean: 40.349 Gy, Max: 55.280 Gy, Vol: 115.694 cc



METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS) WEIGHT
Dose (Gy) covering whole GTVP minus 0.03 (cc)	37.924	30 <input checked="" type="checkbox"/> 0p30	4p33 5p35 35 <input checked="" type="checkbox"/>	IDEAL (5.00) 5.00

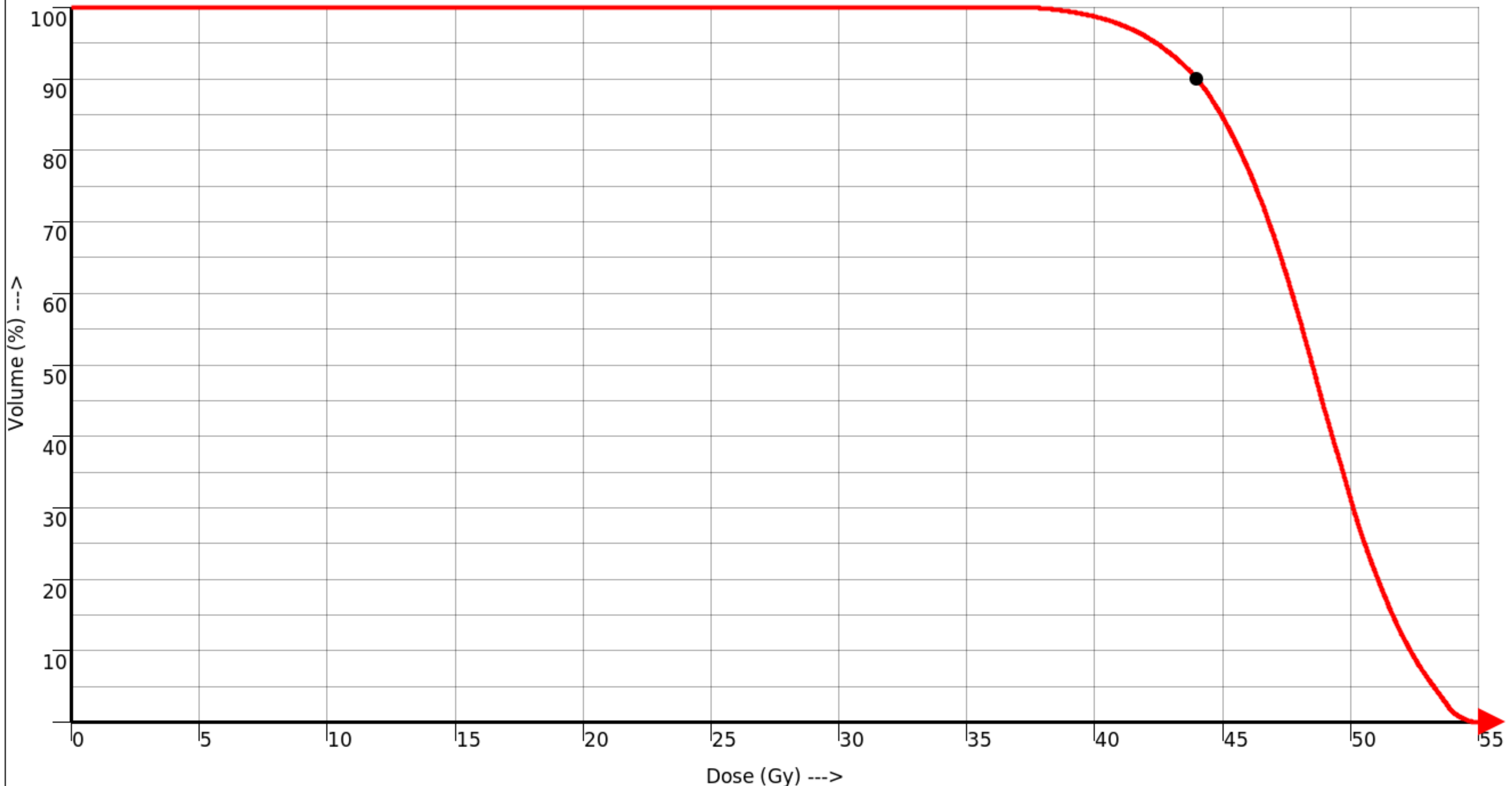
Cumulative DVH: GTVp (28.234 cc)  
Min: 36.061 Gy, Mean: 48.266 Gy, Max: 55.280 Gy, Vol: 28.234 cc





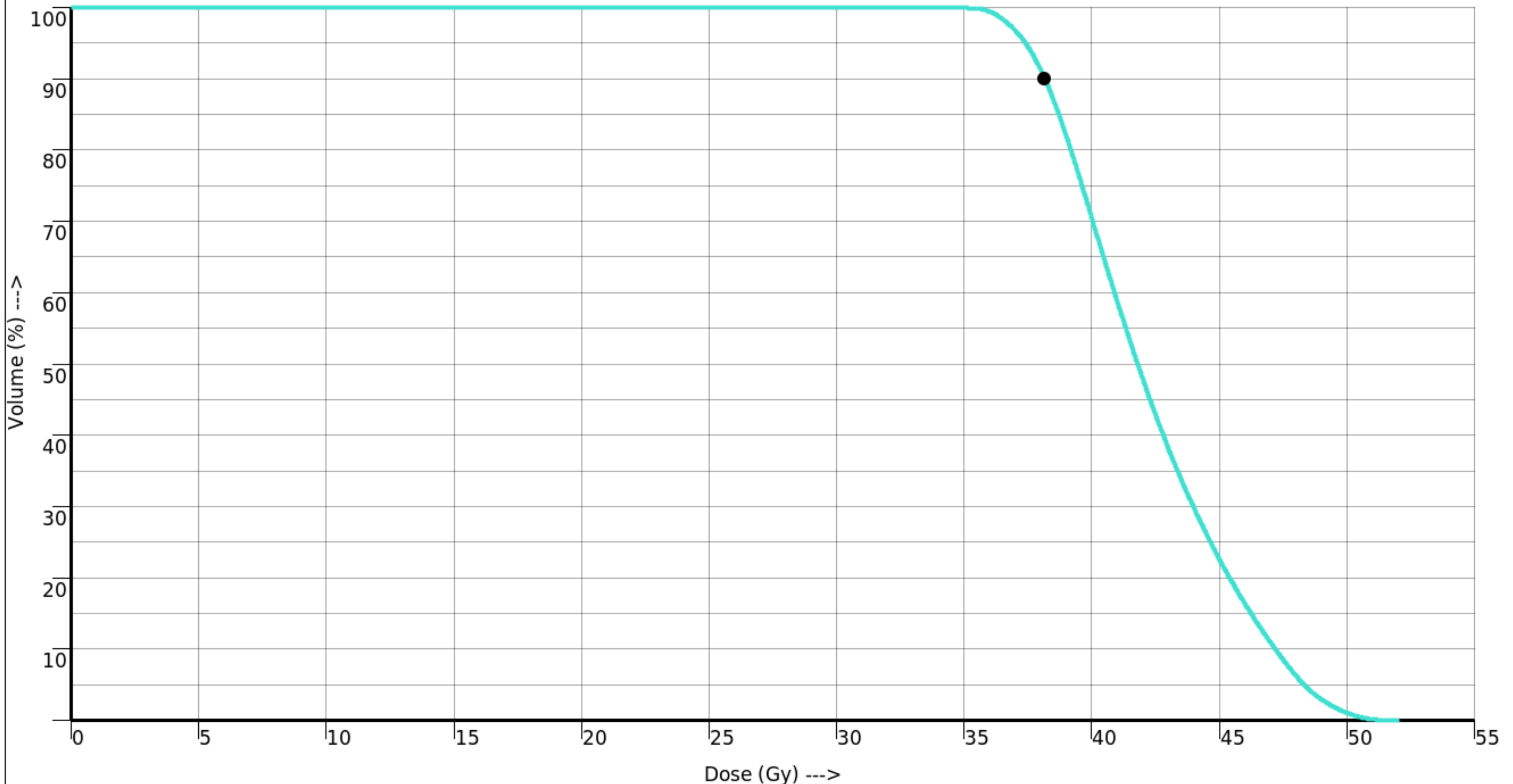
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Dose (Gy) covering 90 (%) of the GTVP	44.000	25 <input checked="" type="checkbox"/>	33 <input checked="" type="checkbox"/>	IDEAL (20.00)	20.00

Cumulative DVH: GTVp (28.234 cc)  
Min: 36.061 Gy, Mean: 48.266 Gy, Max: 55.280 Gy, Vol: 28.234 cc



METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Dose (Gy) covering 90 (%) of the TVI	38.167	33 <input checked="" type="checkbox"/>	35 <input checked="" type="checkbox"/>	IDEAL (10.00)	10.00

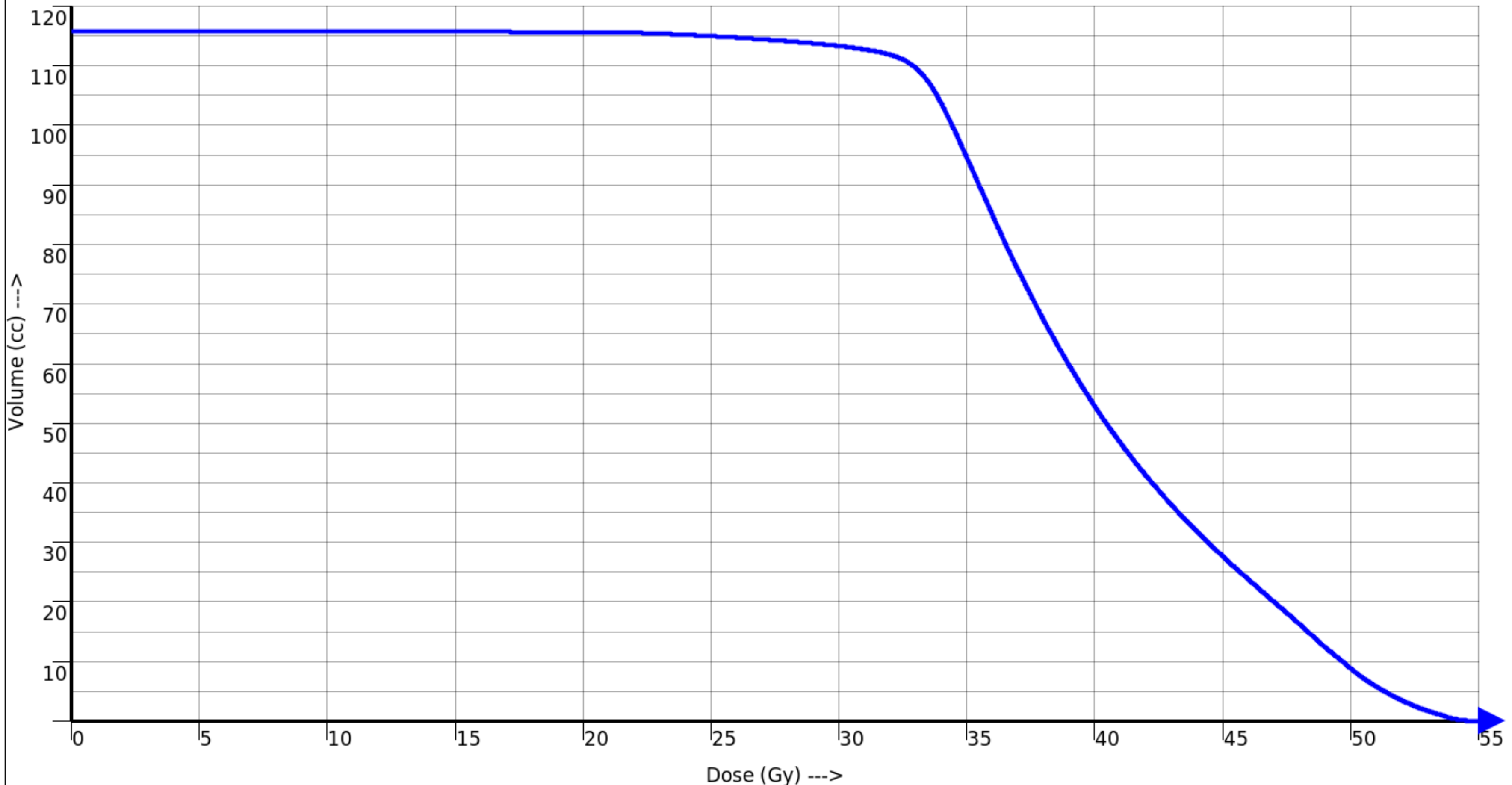
Cumulative DVH: TVI (25.297 cc)  
Min: 33.134 Gy, Mean: 42.245 Gy, Max: 52.075 Gy, Vol: 25.297 cc



METRIC	RESULT	MIN REQ					IDEAL	PERFORMANCE (PTS) WEIGHT	
Conformation Number [33 (Gy), PTV3300]	0.891	0.6	<input checked="" type="checkbox"/>	0p 0.6	2p 0.7	16p 0.8	20p 1	<input type="checkbox"/>	GOOD (17.82) 20.00

DETAILS: PTV3300 Vol Covered by 33.000 Gy (cc): 109.63, PTV3300 Vol (cc): 115.69, 33.000 Gy Irradiated Vol (cc): 116.54

Cumulative DVH: PTV3300 (115.694 cc)  
Min: 16.569 Gy, Mean: 40.349 Gy, Max: 55.280 Gy, Vol: 115.694 cc

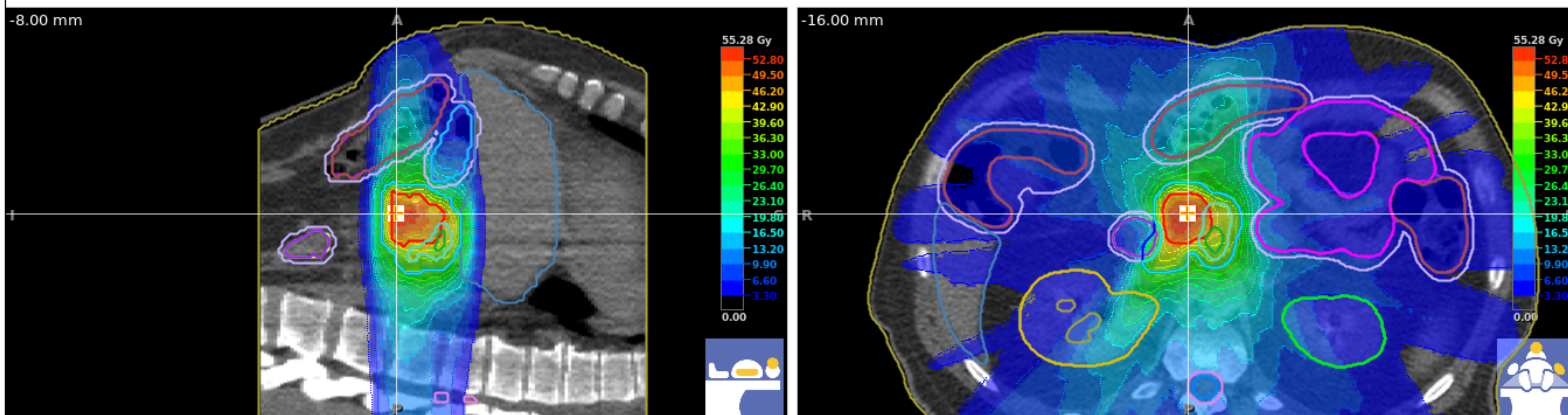




METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS) WEIGHT
Structure(s) containing the global max dose point	(5 values)	PTV3300 ✓	4.2p CTV3300 GTVP ✓	IDEAL (7.00) 7.00

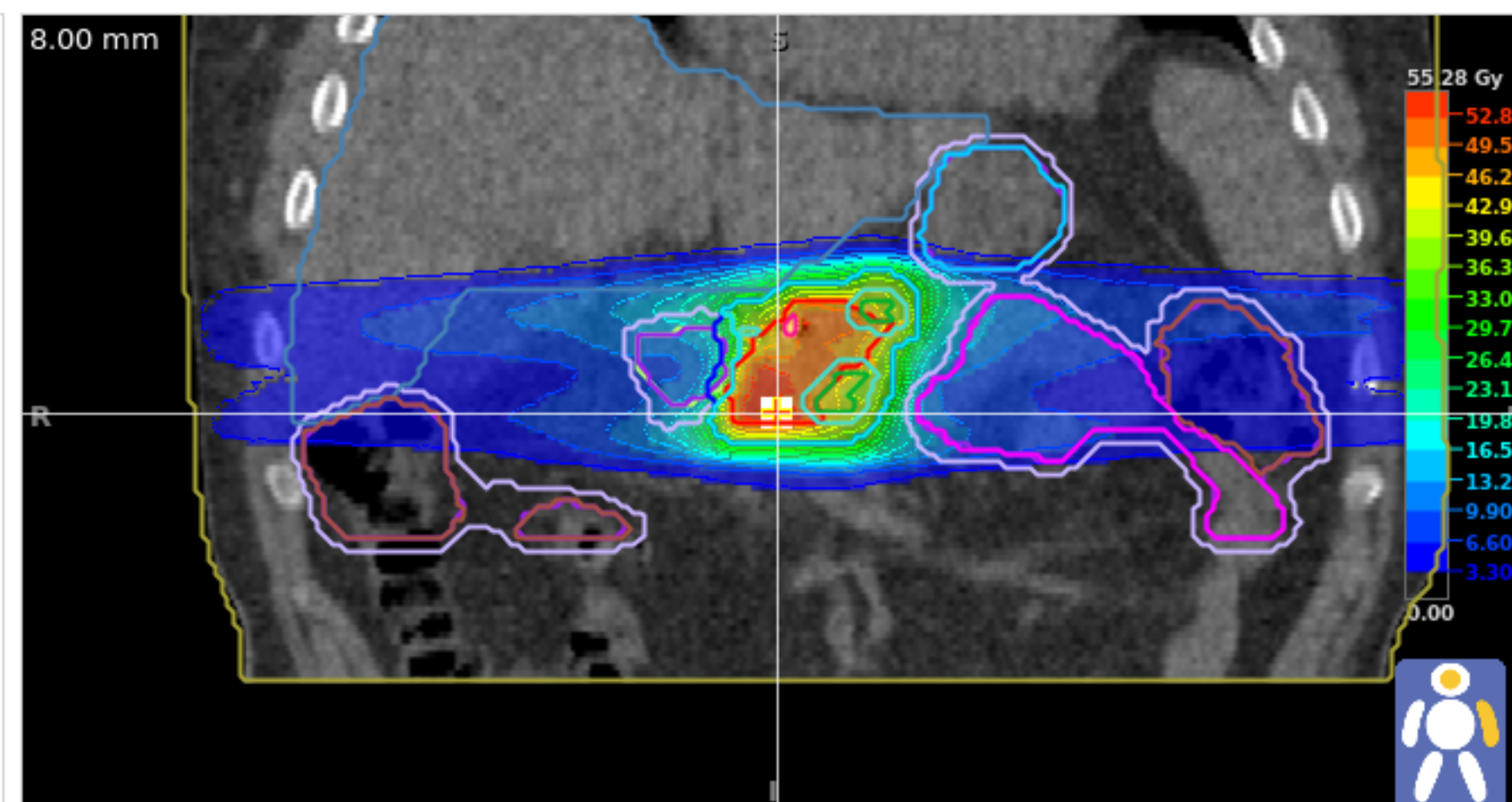
DETAILS: Global Max Location (mm): [-8.00, -16.00, 8.00], Structure(s) containing the global max dose: Body, CTV3300 , GTVp, PTV3300 , PTV3300\_EVAL

### Planes Intersecting Global Max Dose



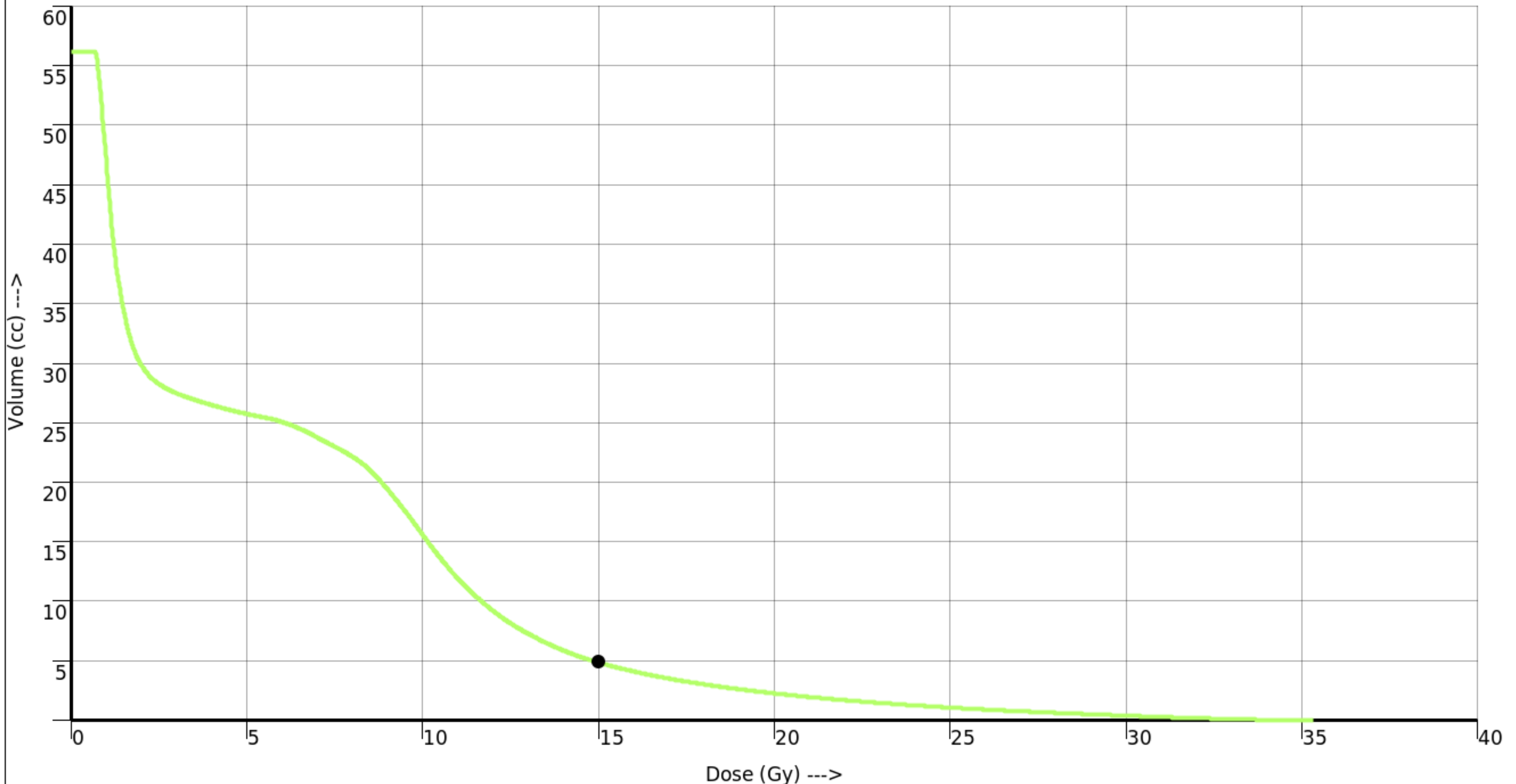
Global Max Dose (Gy): 55.27982  
X (mm): -224.0 to 226.0 step 2.0  
Y (mm): -98.0 to 134.0 step 2.0  
Z (mm): -178.0 to 130.0 step 2.0  
DICOM Origin (mm): (-2.90, 23.40, -40.00)

XYZ coordinates have been transformed into an intuitive IEC couch coordinate system where: +X is couch's lateral left; +Y is towards gantry; and +Z is vertical up from couch.



METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the DUODENUM covered by 15 (Gy)	4.850	20 <input checked="" type="checkbox"/>	60 <input type="checkbox"/>	GOOD (5.35)	6.00

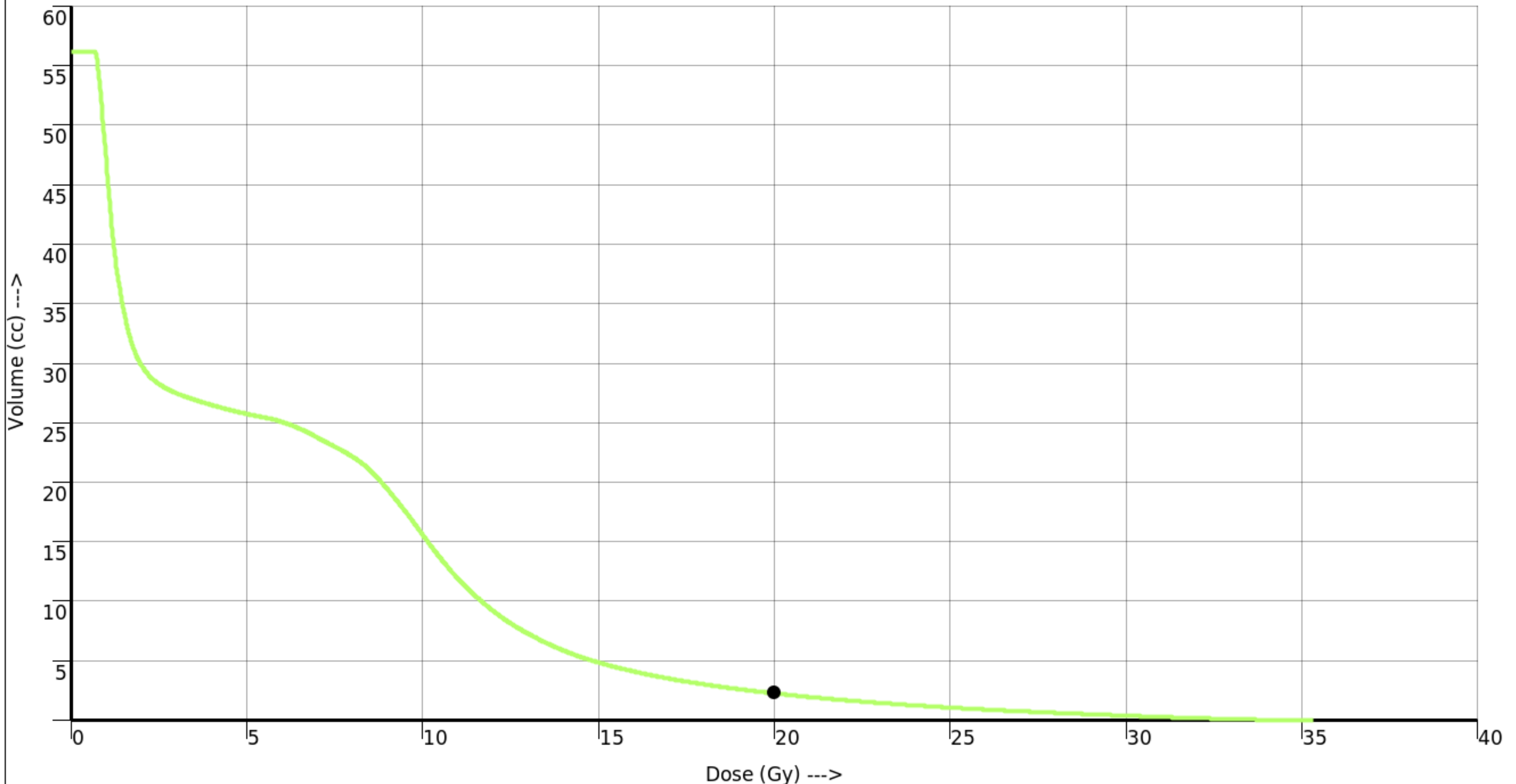
Cumulative DVH: Duodenum (56.201 cc)  
Min: 0.642 Gy, Mean: 6.332 Gy, Max: 35.328 Gy, Vol: 56.201 cc





METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the DUODENUM covered by 20 (Gy)	2.252	10 <input checked="" type="checkbox"/>	700	GOOD (5.95)	7.00

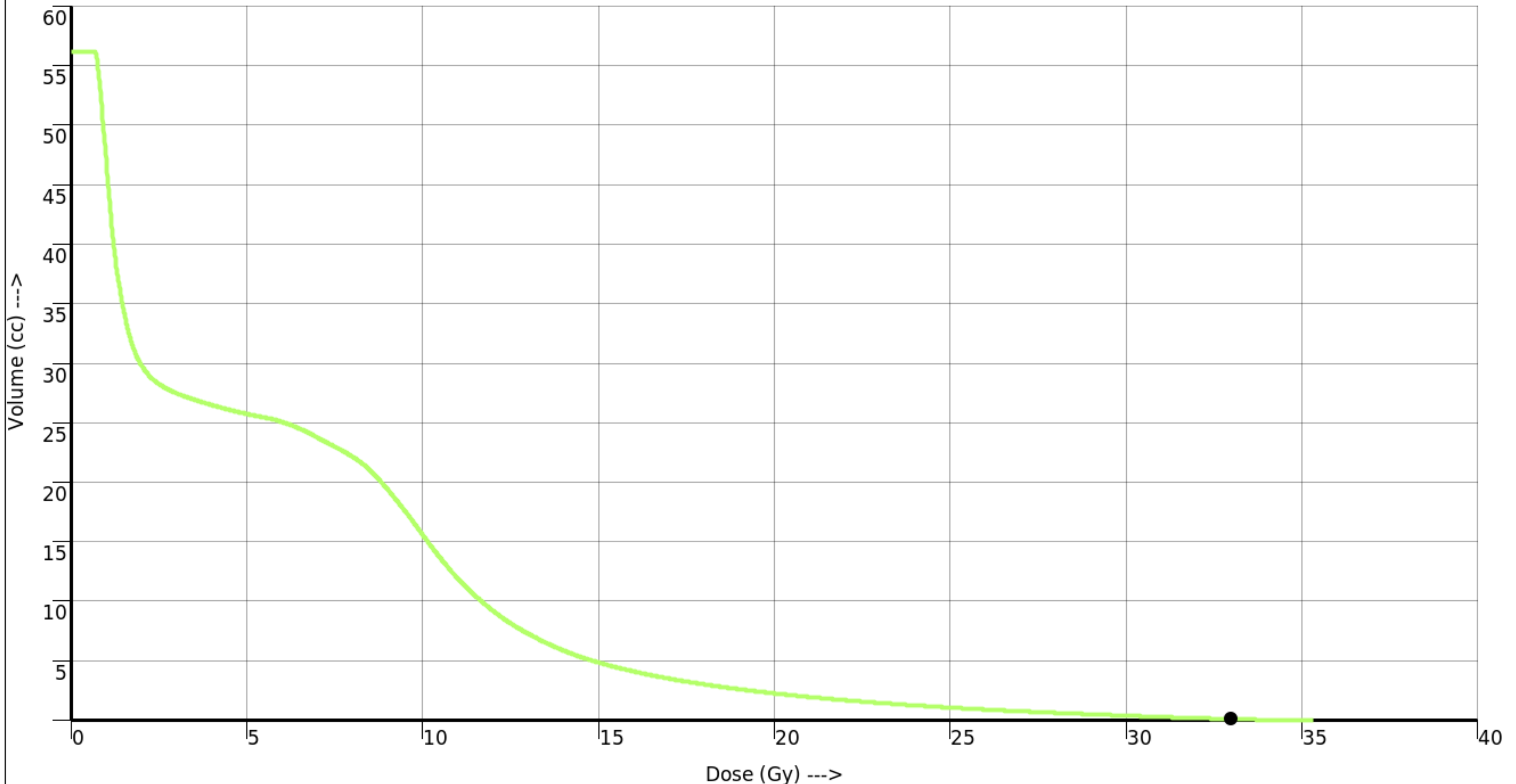
Cumulative DVH: Duodenum (56.201 cc)  
Min: 0.642 Gy, Mean: 6.332 Gy, Max: 35.328 Gy, Vol: 56.201 cc





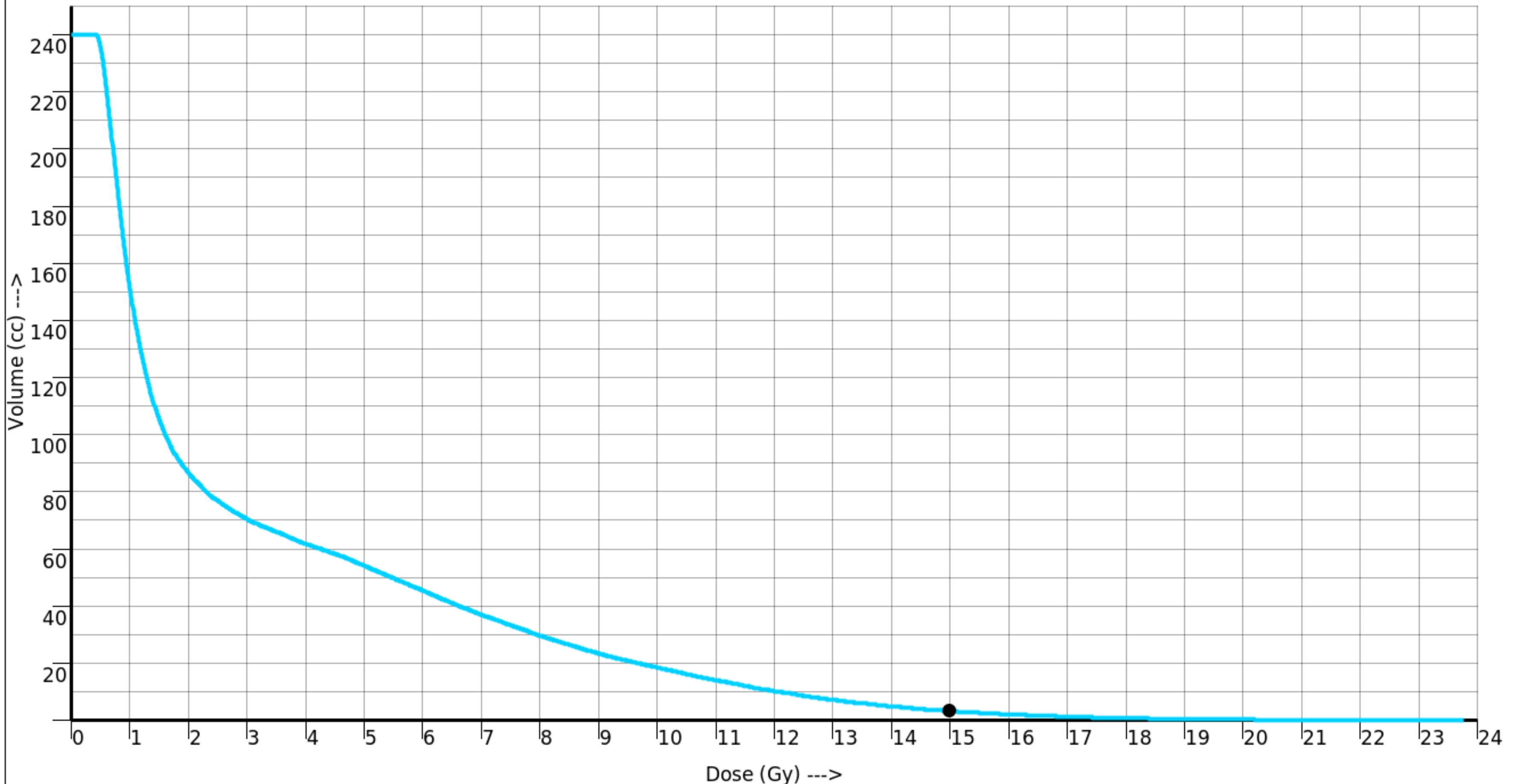
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the DUODENUM covered by 33 (Gy)	0.094	3 <input checked="" type="checkbox"/>	6.4p 8p 0	<input type="checkbox"/> GOOD (7.85)	8.00

Cumulative DVH: Duodenum (56.201 cc)  
Min: 0.642 Gy, Mean: 6.332 Gy, Max: 35.328 Gy, Vol: 56.201 cc



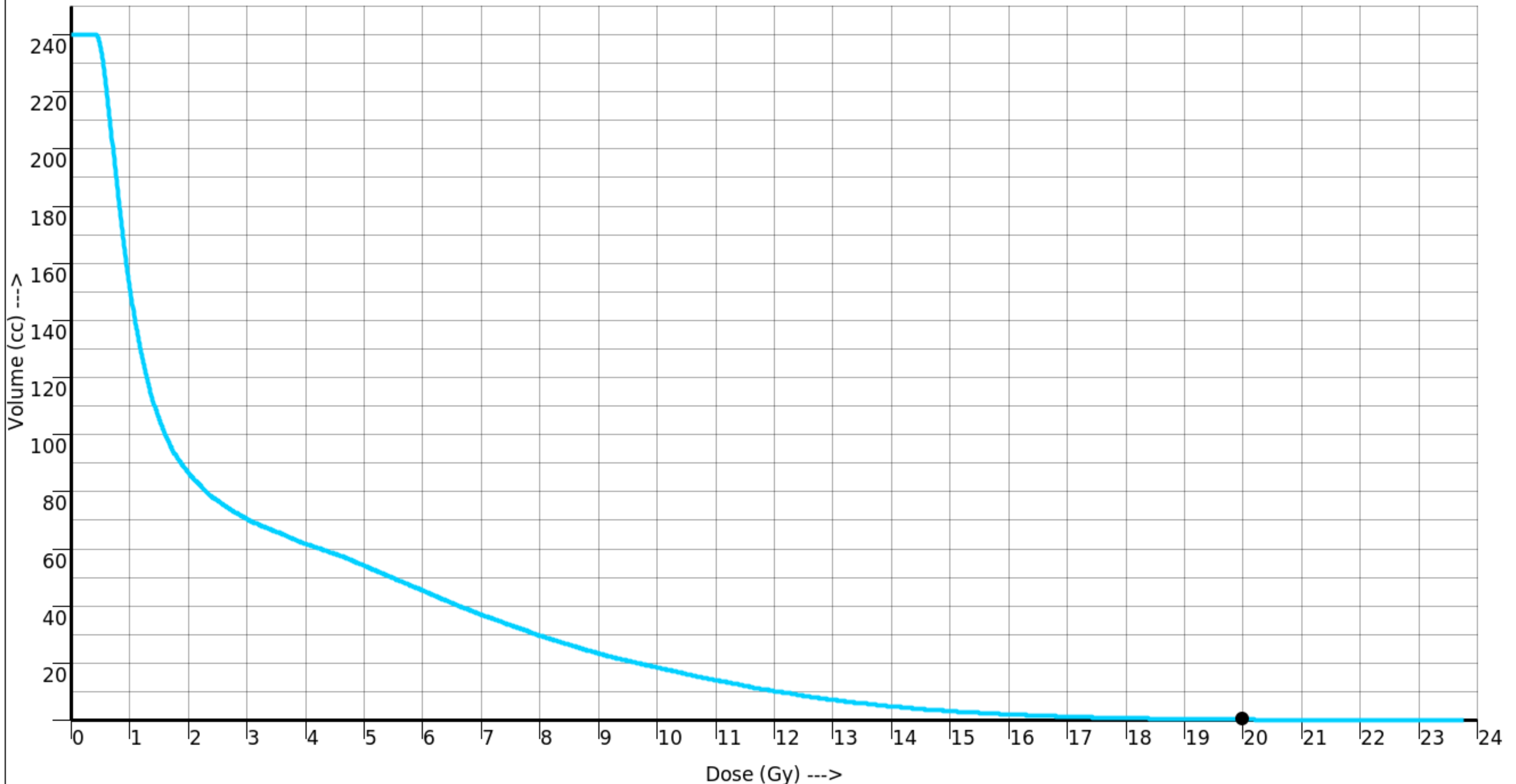
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the STOMACH covered by 15 (Gy)	3.201	20 <input checked="" type="checkbox"/>	50 <input type="checkbox"/>	GOOD (4.64)	5.00

Cumulative DVH: Stomach (240.178 cc)  
Min: 0.382 Gy, Mean: 3.126 Gy, Max: 23.775 Gy, Vol: 240.178 cc



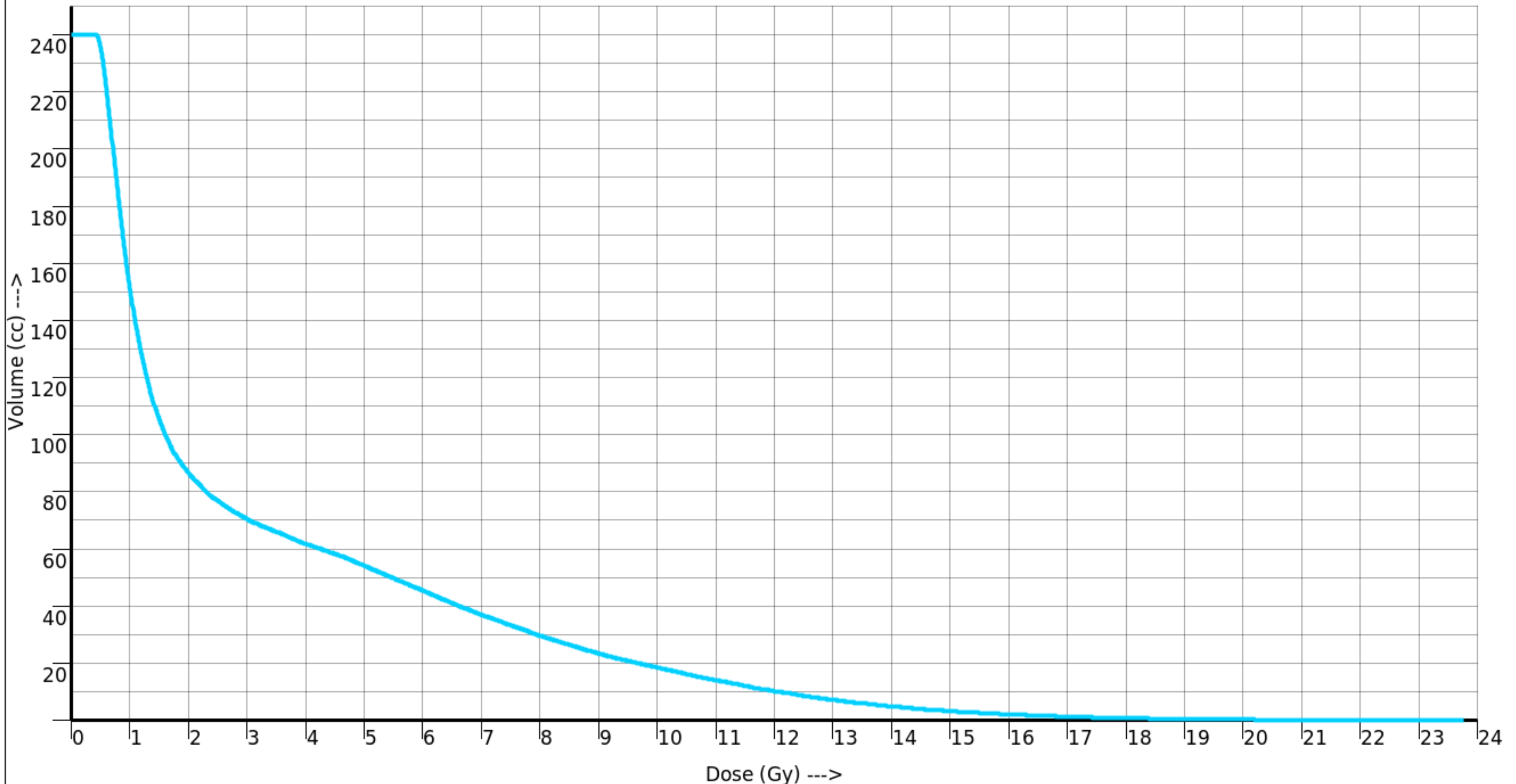
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the STOMACH covered by 20 (Gy)	0.225	10 <input checked="" type="checkbox"/>	4.8p 6p 0	<input type="checkbox"/> GOOD (5.91)	6.00

Cumulative DVH: Stomach (240.178 cc)  
Min: 0.382 Gy, Mean: 3.126 Gy, Max: 23.775 Gy, Vol: 240.178 cc



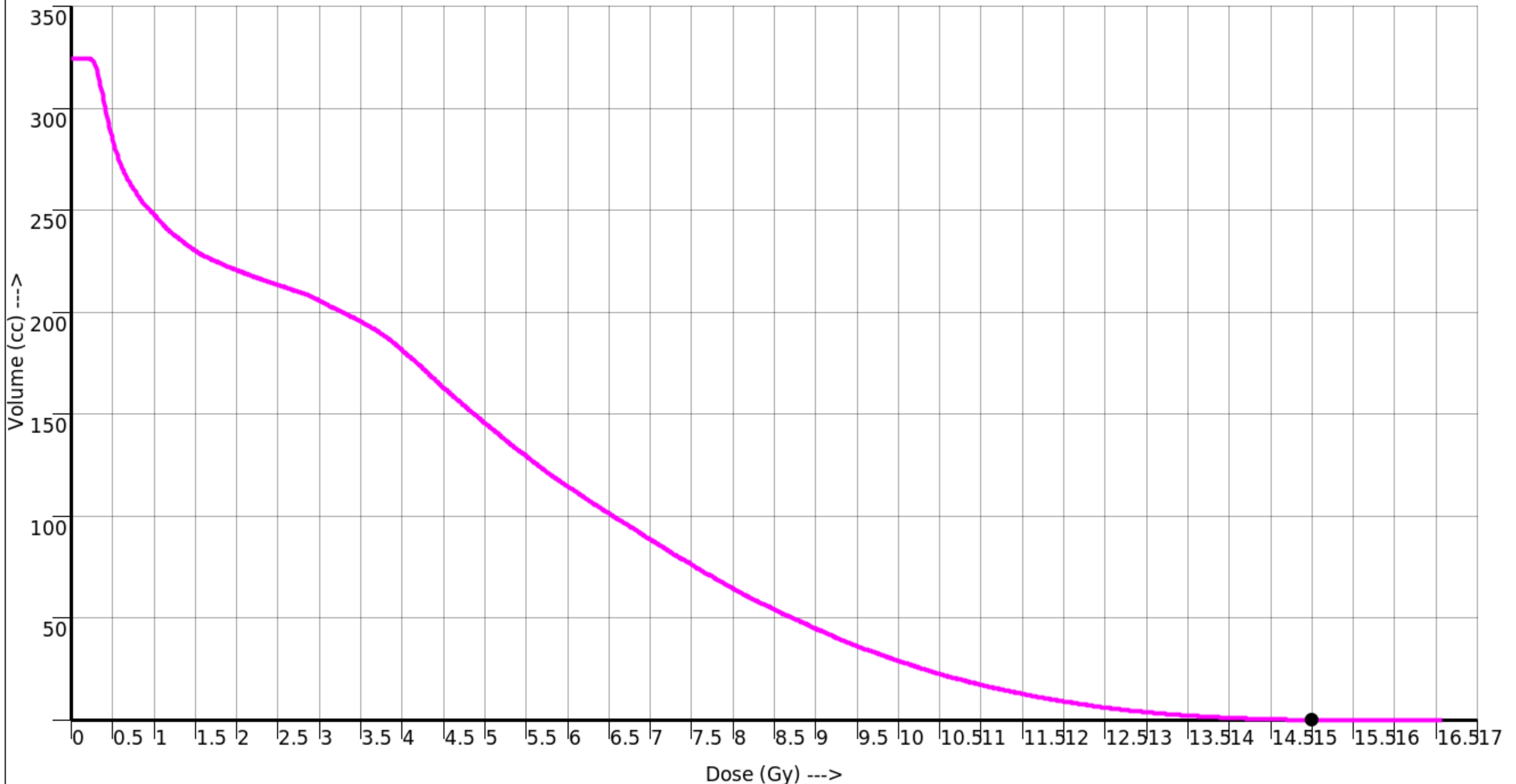
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the STOMACH covered by 33 (Gy)	0.000	3 <input checked="" type="checkbox"/> 0p3	5.6p1 7p0 0	<input checked="" type="checkbox"/> IDEAL (7.00)	7.00

Cumulative DVH: Stomach (240.178 cc)  
Min: 0.382 Gy, Mean: 3.126 Gy, Max: 23.775 Gy, Vol: 240.178 cc



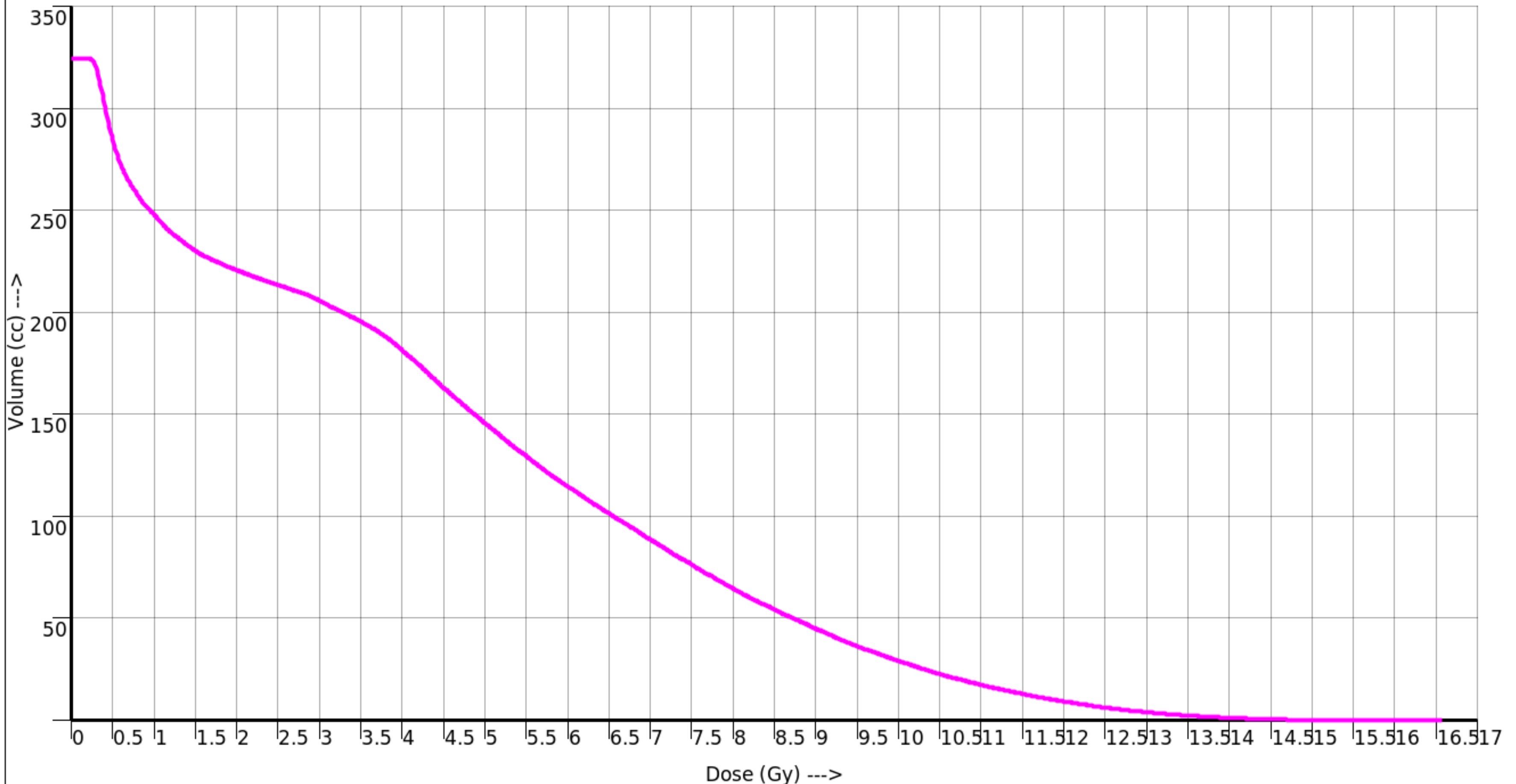
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the SMALLBOWEL covered by 15 (Gy)	0.097	20 <input checked="" type="checkbox"/>	0.097	GOOD (3.99)	4.00

Cumulative DVH: SmallBowel (324.106 cc)  
Min: 0.224 Gy, Mean: 4.731 Gy, Max: 16.575 Gy, Vol: 324.106 cc



METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the SMALLBOWEL covered by 20 (Gy)	0.000	10 <input checked="" type="checkbox"/>	0 <input checked="" type="checkbox"/>	IDEAL (5.00)	5.00

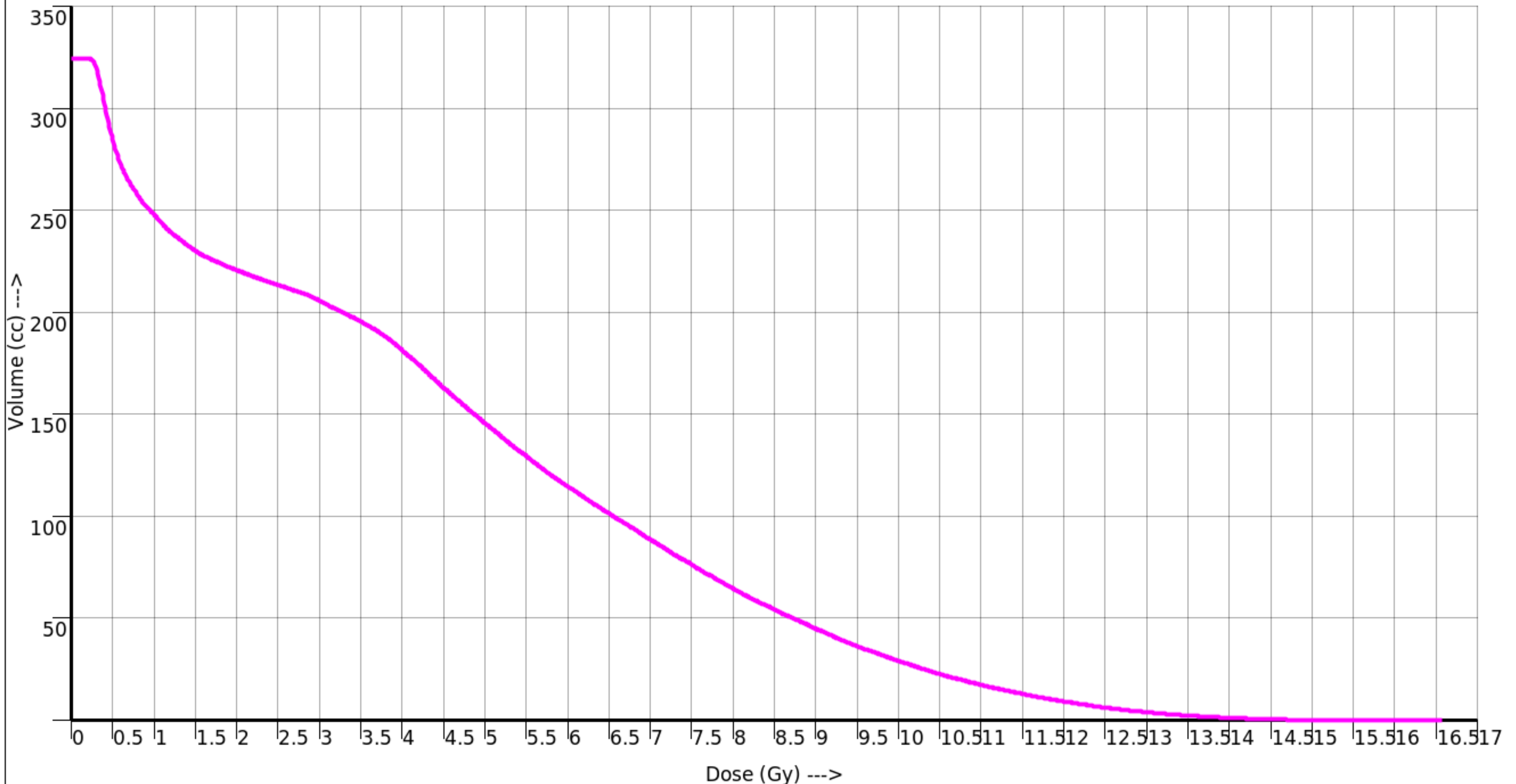
Cumulative DVH: SmallBowel (324.106 cc)  
Min: 0.224 Gy, Mean: 4.731 Gy, Max: 16.575 Gy, Vol: 324.106 cc





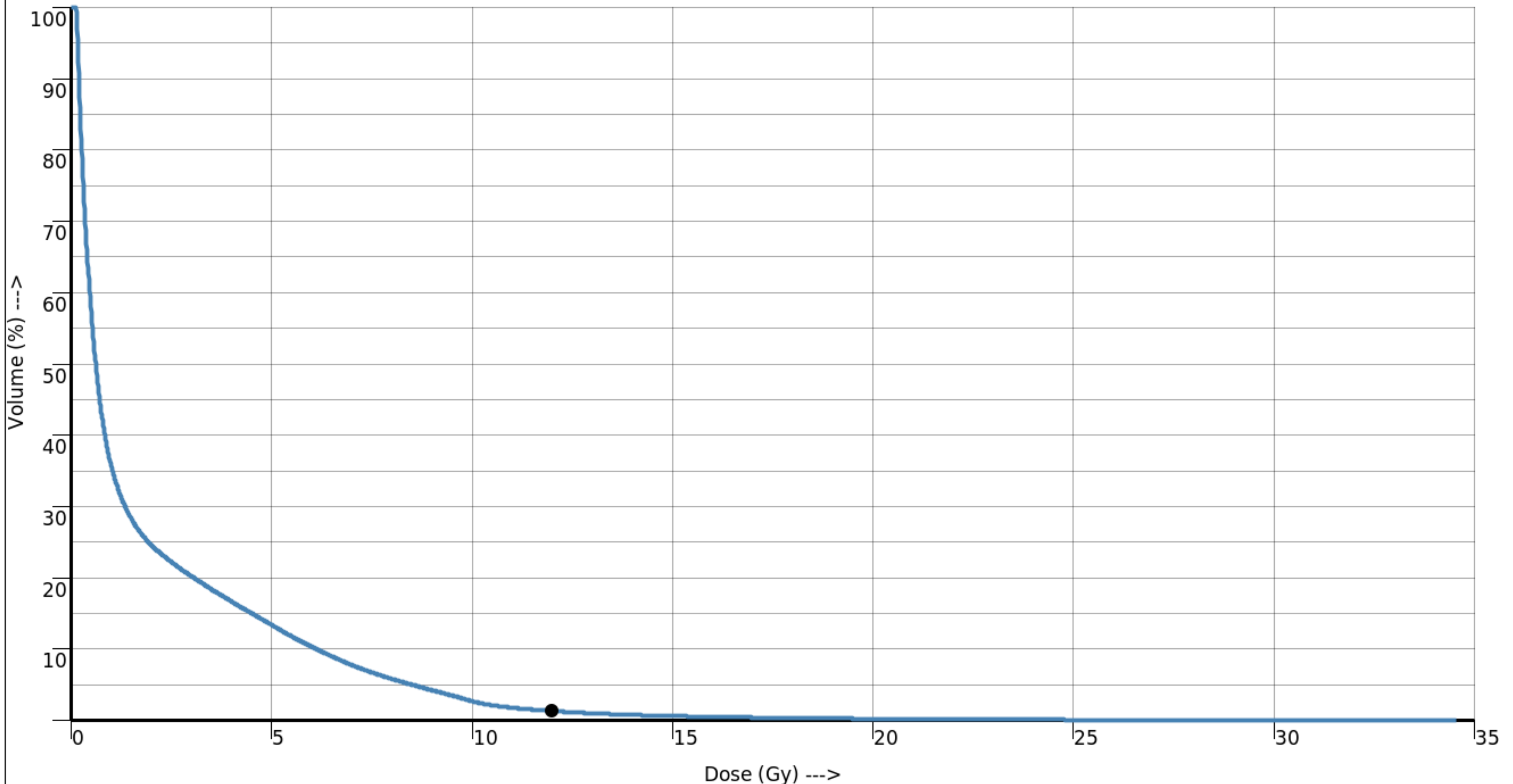
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the SMALLBOWEL covered by 33 (Gy)	0.000	3 <input checked="" type="checkbox"/>	4.8p 1	6p 0 <input checked="" type="checkbox"/>	IDEAL (6.00) 6.00

Cumulative DVH: SmallBowel (324.106 cc)  
Min: 0.224 Gy, Mean: 4.731 Gy, Max: 16.575 Gy, Vol: 324.106 cc



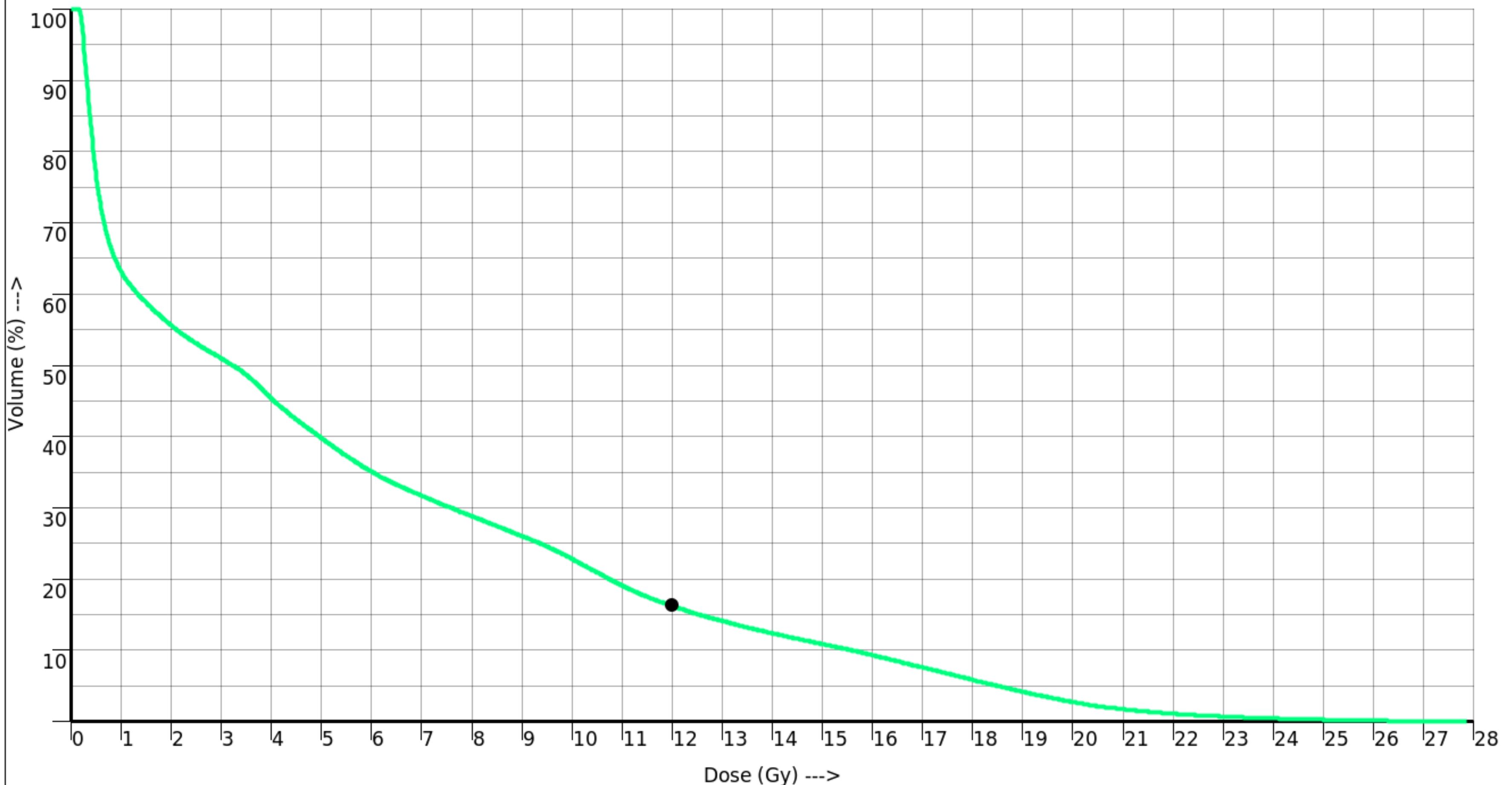
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (%) of the LIVER covered by 12 (Gy)	1.295	< 50 <input checked="" type="checkbox"/> 0p	< 50 3p	<input checked="" type="checkbox"/> IDEAL (3.00)	3.00

Cumulative DVH: LIVER (2183.873 cc)  
Min: 0.095 Gy, Mean: 1.922 Gy, Max: 34.542 Gy, Vol: 2183.873 cc



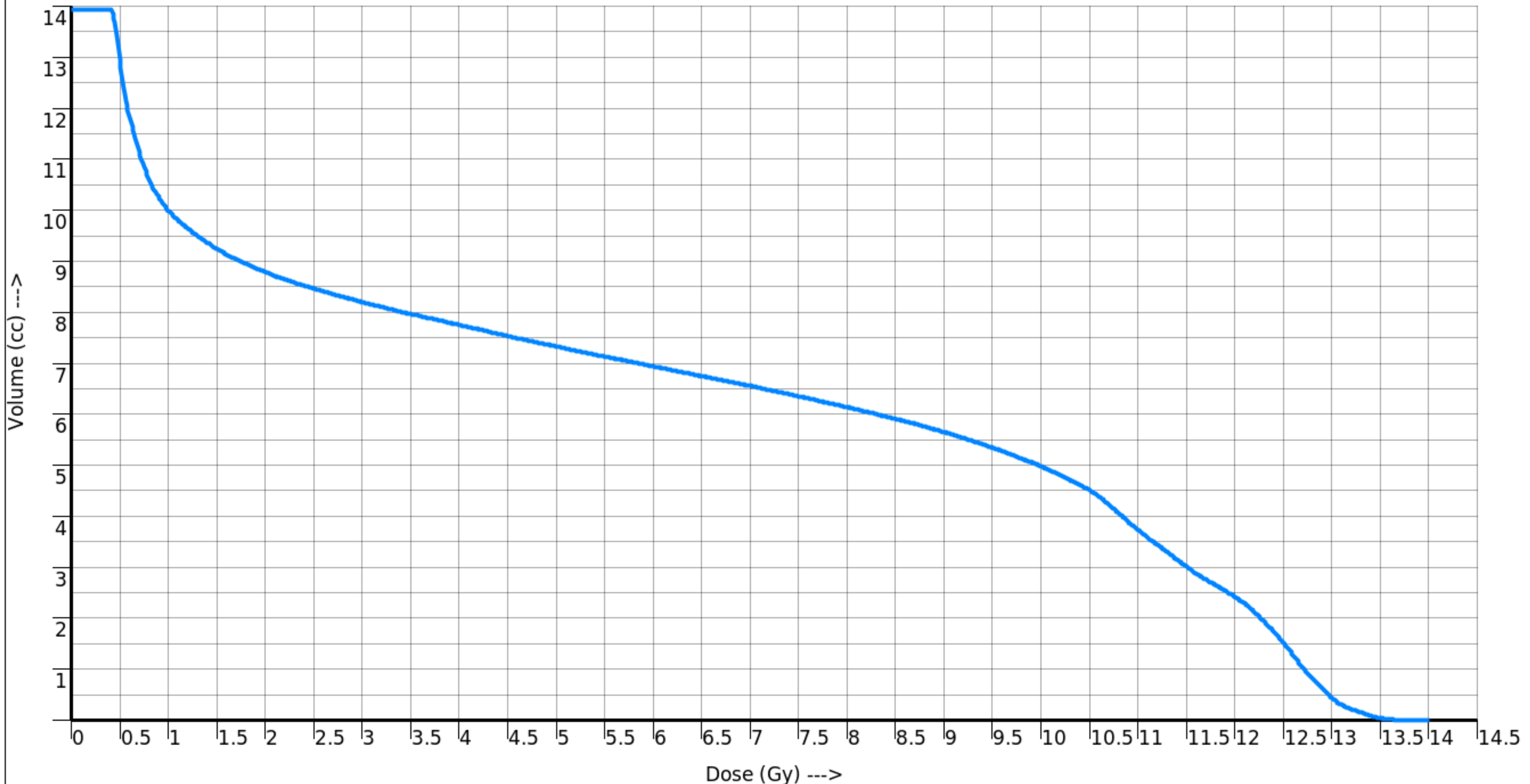
METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (%) of the BILATKIDNEY covered by 12 (Gy)	16.206	< 75 <input checked="" type="checkbox"/> 0p	< 75 3p	<input checked="" type="checkbox"/> IDEAL (3.00)	3.00

Cumulative DVH: BilatKidney (382.137 cc)  
Min: 0.137 Gy, Mean: 5.530 Gy, Max: 27.866 Gy, Vol: 382.137 cc



METRIC	RESULT	MIN REQ	IDEAL	PERFORMANCE (PTS)	WEIGHT
Volume (cc) of the SPINALCORD covered by 20 (Gy)	0.000	< 1 <input checked="" type="checkbox"/> 0p	< 1 3p	<input checked="" type="checkbox"/> IDEAL (3.00)	3.00

Cumulative DVH: SpinalCord (13.931 cc)  
Min: 0.395 Gy, Mean: 6.187 Gy, Max: 14.003 Gy, Vol: 13.931 cc



METRIC		RESULT	MIN REQ		IDEAL	PERFORMANCE (PTS) WEIGHT	
Cumulative meterset over all treatment beams		3741.772	---	---	---	---	---
BEAM [#] NAME		MACHINE	MODALITY	ENERGY	METERSET	BEAM-ON TIME (Est.)	
[1] 1		VersaHD	VMAT	10 MV	1908.575 MU	Invalid Dose Rate	
[2] 2		VersaHD	VMAT	10 MV	1833.197 MU	Invalid Dose Rate	
					3741.772 (TOTAL)	N/A (TOTAL)	
BEAM [#] NAME		ISOCENTER		GEOMETRY	MODIFIERS		
[1] 1		0, 0, 0 (DICOM -2.9, 23.4, -40)		Gantry (Dynamic CW and CCW): 180 to 180, Collimator: 0, Cylaxis MLC (X)	Cylaxis MLC (X)		
[2] 2		0, 0, 0 (DICOM -2.9, 23.4, -40)		Gantry (Dynamic CW and CCW): 185.4 to 180, Collimator: 90, Jaw MLC (X)	Jaw MLC (X)		