

Digital Reference Object MTV Analysis Sheet - Version Date: 28 April 2016

You may record your answers directly on this form or by filling out the accompanying Excel spreadsheet. The numbers on each line indicate the corresponding rows and columns of the Excel spreadsheet.

If you are testing more than one Metabolic Tumor Volume (MTV) estimation algorithm, please fill out one form for each MTV algorithm tested. If you are testing multiple settings for a single MTV algorithm, please fill out one form for each set of MTV algorithm parameters used.

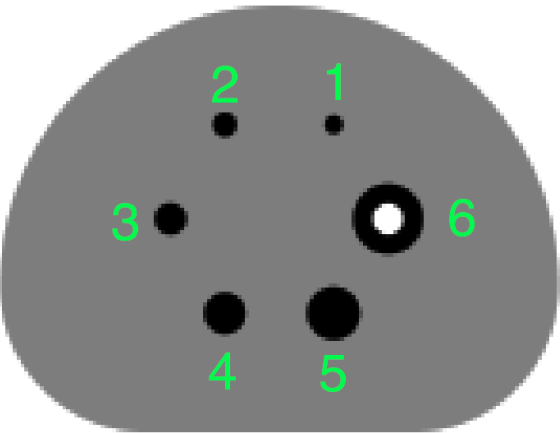
1 Basic Information

Fill out the basic information for the test. Include the software used, and the algorithm used for estimation of Metabolic Tumor Volume (voxel thresholding, nearest neighbor, etc.) as well as any user-defined settings used for the MTV algorithm.

ROW	Item	Value
6	Name of Institution	
7	Name of person testing software	
8	Email or Phone contact	
9	Date of test	
10	Workstation used for test (Serial #)	
11	Software Manufacturer	
12	Name of software being tested	
13	Version of software	
14	Software MTV Method	
15	Settings for MTV Algorithm	

2 Noise-Free DROmtv High Contrast Sphere Volumes

Load the **Noise Free** DROmtv into your viewing software (**Patient Name: DRO MTV Noise Free**). Using an axial view, advance to **slice 22**, which contains the centers of the six 4:1 test spheres as shown in Figure 1. Use your software to compute the Metabolic Tumor Volume of each sphere corresponding to the sphere number shown in Figure 1. Record the MTV and units reported by your software in the table. Please record all decimal places reported by the software.

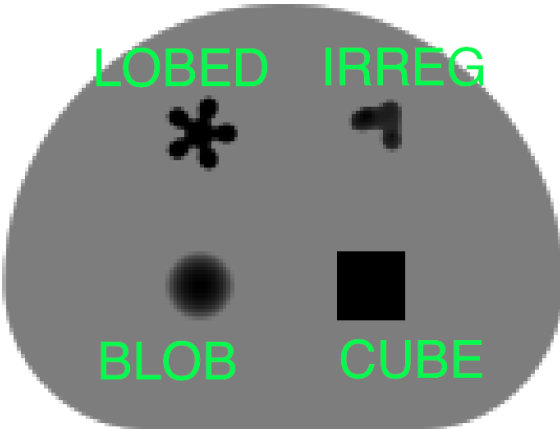


COL:		C	D
ROW	SPHERE	MTV	UNITS
20	SPH 1		
21	SPH 2		
22	SPH 3		
23	SPH 4		
24	SPH 5		
25	SPH 6		

Figure 1: Slice 22 of the Noise-Free DROmtv. The number of each sphere is shown to be entered into the table at right.

3 Noise-Free DROmtv Other Object Volumes

Using an axial view, advance to **slice 52**, which contains the four objects shown in Figure 2: a cube, a spherical blob, a 5-lobed object, and an irregular object). Use your software to compute the Metabolic Tumor Volume of each of the four objects shown in Figure 2. Record the MTV and units reported by your software in the table. Please record all decimal places reported by the software.



COL:		C	D
ROW	OBJECT	MTV	UNITS
30	1 - CUBE		
31	2 - BLOB		
32	3 - LOBED		
33	4 - IRREG		

Figure 2: Slice 52 of the DROmtv. The four objects are named: (1) CUBE ; (2) BLOB ; (3) LOBED ; (4) IRREG.

4 Noise-Free DROmtv Low Contrast Sphere Volumes

Using an axial view, advance to **slice 83**, which contains the centers of the six 2:1 test spheres as shown in Figure 3. Use your software to compute the Metabolic Tumor Volume of each sphere corresponding to the sphere number shown in Figure 3. Record the MTV and units reported by your software in the table. Please record all decimal places reported by the software.

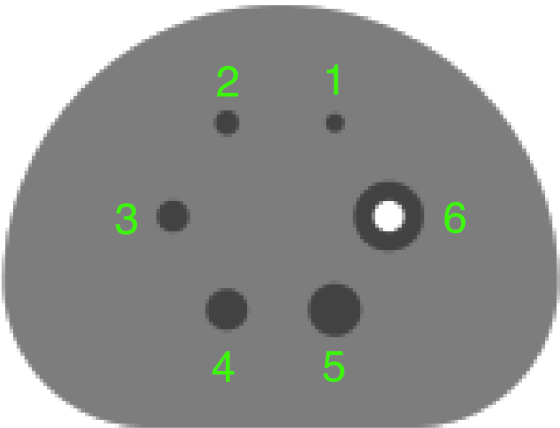


Figure 3: Slice 83 of the Noise-Free DROmtv. The number of each sphere is shown to be entered into the table at right.

COL:		C	D
ROW	SPHERE	MTV	UNITS
38	SPH 1		
39	SPH 2		
40	SPH 3		
41	SPH 4		
42	SPH 5		
43	SPH 6		

5 Noisy DROmtv High Contrast Sphere Volumes

Load the **Noisy DROmtv** into your viewing software (**Patient Name: DRO MTV Noise - 6mm FWHM**). Using an axial view, advance to **slice 22**, which contains the centers of the six test spheres as shown in Figure 4. Use your software to compute the Metabolic Tumor Volume of each sphere corresponding to the sphere number shown in Figure 4. Record the MTV and units reported by your software in the table. Please record all decimal places reported by the software.

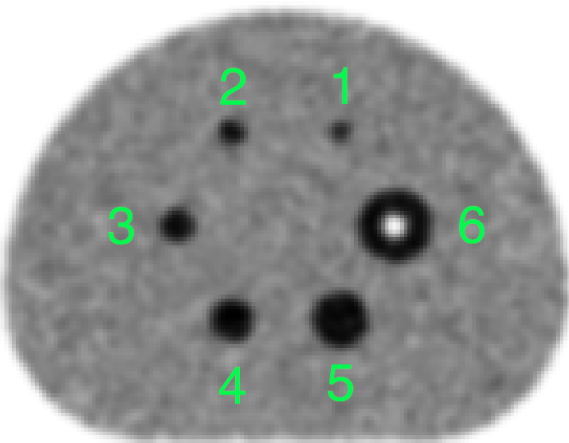
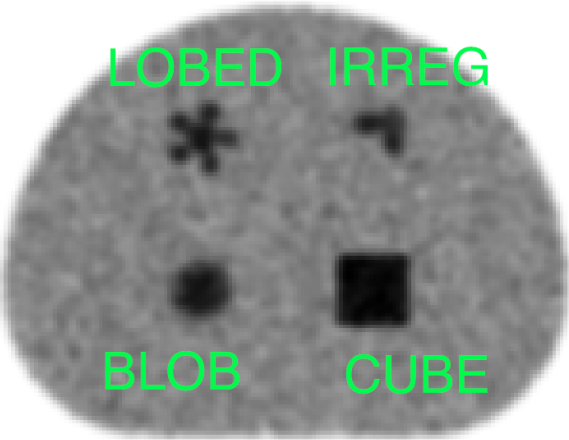


Figure 4: Slice 22 of the Noisy DROmtv. The number of each sphere is shown to be entered into the table at right.

COL:		C	D
ROW	SPHERE	MTV	UNITS
48	SPH 1		
49	SPH 2		
50	SPH 3		
51	SPH 4		
52	SPH 5		
53	SPH 6		

6 Noisy DROmtv Other Object Volumes

Using an axial view, advance to **slice 52**, which contains the four objects shown in Figure 5: a cube, a spherical blob, a 5-lobed object, and an irregular object). Use your software to compute the Metabolic Tumor Volume of each of the four objects shown in Figure 5. Record the MTV and units reported by your software in the table. Please record all decimal places reported by the software.

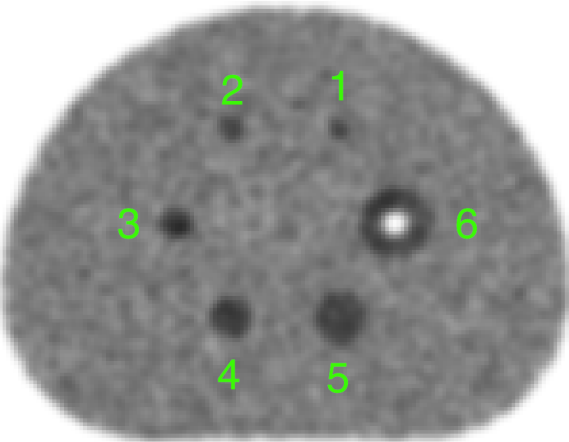


COL:		C	D
ROW	OBJECT	MTV	UNITS
58	1 - CUBE		
59	2 - BLOB		
60	3 - LOBED		
61	4 - IRREG		

Figure 5: Slice 52 of the Noisy DROmtv.
The four objects are named: (1) CUBE ;
(2) BLOB ; (3) LOBED ; (4) IRREG.

7 Noisy DROmtv Low Contrast Sphere Volumes

Using an axial view, advance to **slice 83**, which contains the centers of the six 2:1 test spheres as shown in Figure 6. Use your software to compute the Metabolic Tumor Volume of each sphere corresponding to the sphere number shown in Figure 6. Record the MTV and units reported by your software in the table. Please record all decimal places reported by the software.



COL:		C	D
ROW	SPHERE	MTV	UNITS
66	SPH 1		
67	SPH 2		
68	SPH 3		
69	SPH 4		
60	SPH 5		
71	SPH 6		

Figure 6: Slice 83 of the Noisy DROmtv.
The number of each sphere is shown to be
entered into the table at right.

8 DROmtv Issues and Anomalies

Please report any anomalies or errors that you encountered when using the DROmtv. Please scroll through the entire image volume and report any issues within the image volume. Please report 'None' if none are found.

76 DROmtv Anomalies:

9 User Feedback

We appreciate any feedback that you have to offer in improving these tests. If you have any comments or suggestions about the design of the test, the layout, submission process, etc., please let us know or write 'None'.

81 Feedback:

10 Submit the Report

Email the completed Excel spreadsheet or pdf document and any screenshots taken to **jkoudelik@rsna.org** with subject line **DROmtv report**. Include your name and the name of your institution in the body of the email.

Contact the Imaging Research Laboratory at the University of Washington with any questions or comments:

email: petctdro@uw.edu
Phone: 206-543-0517
Fax: 206-543-8356
