We have developed a simple and user friendly electronic **Data Entry Management System** (**DEMS**) to ensure secure, easy and accurate data collection obtained from the collaborators of the participating centres.

1 Login to the website by clicking on the "Sign In" button available at the end of the homepage to access all necessary study documents and submit your cases online. To do so, please type in your username and password at the "User Account" page available <u>https://livervision.org/?q=user</u>

Protocol Study the protocol carefully. Click here	Instructions Contact us if something not clea Click here	r. Acce	Submit Cases so the data entry platform. Get started	FRANCE NEWYORK
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	Sign in			
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LiverVision.org 3D Liver Visualisation and Volumetry CT Software	Home Abc	out Team Pro	tocol Instructions	Contact
Home » User account				
User account				
Log in Request new password				
Member	-			
Enter your LiverVision.org username.	-3			
Password *				
•••••	2			
Enter the password that accompanies your username.				
САРТСНА				
This question is for testing whether or not you are a human visit I'm not a robot	or and to prevent automated sp	pam submissions.		
Log in				
Copyright © 2018,LiverVision.org			Developed by D	imitri Raptis

- 2 Your account login details including your username and password were provided to your by email sent from our study co-PI, Dimitri Raptis (draptis@btinternet.com) at the Royal Free Hospital (see below how to contact us). If for any reason you did not receive this email, please check your spam folder or contact Dimitri Raptis to send it to you again.
  - 3 Please ensure that you have carefully read the study protocol before attempting entering cases at our Data Entry Management System (DEMS). To do so, please click on the "Protocol" link at the main menu bar as shown below. Alternatively you may directly access the study protocol using the following link: <u>https://livervision.org/?q=protocol</u>





### Protocol

Accuracy of established manual versus new automated liver volumetry software in patients undergoing liver surgery and living donor liver transplantation



#### Background

Liver volumetry has been widely used in liver surgery and living donor liver transplantation to estimate the future liver remnant or the required liver volume for the recipient, respectively.

Liver volumetry is typically performed using CT imaging with specially designed software. Such manual measurements are time consuming and there is an ongoing debate whether the they reflect the actual liver volume when performed by radiologists or surgeons as well as according to the different software currently available in the market.

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**3D Liver Visualisation and Volumetry CT Software** 

4 To start submitting your cases to our electronic Data Management System (DEMS) please click on the "Members Portal" link available in the platform as shown below:



Then you will be directed to a welcome page as shown below. Please click on the next button:



Then you will be directed to the "List of cases" page as shown below:

<b>.iverVision</b> D Liver Visualis	I.Org ation and Volume	try CT Software	Home	About	Team	Protocol	Instructions	Members Portal	
ome » Memb	ers Portal » Click	on each case b	elow to access it	s information					
Click on e									
Cases 1-18	Cases 19-36	Cases 37-54	Cases 55-72	Cases 73-90	Cases 91-10	08			
Case 1	Case 19	Case 37	Case 55	Case 73	Case 91				
Case 2	Case 20	Case 38	Case 56	Case 74	Case 92				
Case 3	Case 21	Case 39	Case 57	Case 75	Case 93				
Case 4	Case 22	Case 40	Case 58	Case 76	Case 94				

3D Liver Visualisation and Volumetry CT Software

The list of cases contains all 108 cases included in the study. At the end of this page there is a PDF icon, please click on it to download a PDF printable version. This will help you complete the study by crossing out each completed case and avoid confusion.

Case 13Case 31Case 49Case 67Case 85Case 103Case 14Case 32Case 50Case 68Case 86Case 104Case 15Case 33Case 51Case 69Case 87Case 105Case 16Case 34Case 52Case 70Case 88Case 106Case 17Case 36Case 53Case 71Case 89Case 106Case 18Case 36Case 53Case 72Case 90Case 108control case 36Case 54Case 72Case 90case 106control case 36Case 72Case 90case 108control control
Case 14Case 32Case 50Case 68Case 86Case 104Case 15Case 33Case 51Case 69Case 87Case 105Case 16Case 34Case 52Case 70Case 88Case 106Case 17Case 35Case 53Case 71Case 89Case 107Case 18Case 36Case 54Case 72Case 90Case 108chase 18Case 36Case 54chase 72Case 90chase 108chase 108chase 36Case 54chase 72Case 90chase 108chase 108chase 108chase 108chase 36Case 54chase 72Case 90chase 108chase 108chase 108chase 108chase 108chase 36chase 54chase 72Case 90chase 108chase 108chas
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ck on the icon below to download a printable version of the list of cases. You may cross out every case you have completed or make additional no

Please click on each case to obtain important information that will guide you to complete your volumetric measurements as shown below:

LiverVision.org 3D Liver Visualisation and Volumetry CT Software	Home	About	Team	Protocol	Instructions	Members Portal	Contact
Home » Case 101							
Case 101							
<ul> <li>Gender: Male</li> <li>Age: 30</li> <li>Hepatectomy: Left (+MHV+S1)</li> <li>Middle hepatic vein: With the graft</li> <li>Caudate lobe: With the graft</li> </ul>		_Sı	ıbmit .				
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Then click on the **submit button** after you have completed you volumetry measurements.

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3D Liver Visualisation and Volumetry CT Software

5 The Data Entry Management System (DEMS) consists of a simple electronic form that you may fill in the data for each case (see image below). The DEMS can be also accessed directly using the following link: <a href="https://livervision.org/?q=case\_submission">https://livervision.org/?q=case\_submission</a>

Fields including a red star at the end of the name of the parameter (\*) are mandatory to be able to submit each case. For example, each case should be assigned with a unique Case ID, the first field in the form shown below. If this information is missing, you will not be able to submit the case.

LiverVision.org 3D Liver Visualisation and Volumetry CT Software	Home	About	Team	Protocol	Instructions	Members Portal	Contact				
Home » Members Portal » Submit your measurement and evaluation											
Submit your measurement and evaluation											
Case characteristics	Case characteristics										
Case ID * - Select - 🗘											
Planned hepatectomy *											
Right with MHV											
Right without MHV											
○ Left with caudate lobe											
○ Left without caudate lobe											
Right hepatectomy indicates segments 5-8. Left hepatectomy indicates segments 2-4.											
Imaging characteristics											
Quality of CT scan *											
		Poor	Fair	Good	Very good	Excellent					
Portal venous phase contrast *		0	0	0	0	(					
Third-order portal vein branching *		0	0	0	0	0					
Overall quality *		0	0	0	0	(					
A very good portal venous phase contrast indicates that the portal veins are clearly distinguished, visibly, as well by the liver volumetry software. Similarly, a very good third-order portal vein branching indicates that third-order branches are clearly distinguished, visibly, as well by the liver volumetry software. A very good overall quality of the CT scan images combines that above and indicates that the software could easily identify the veins and mask the liver parenchyma without significant additional manipulation by the user.											

Further instructions and descriptions are available in this page for each parameter. If something is not clear to you please contact us before submitting any cases.

6 Please click on the "**Submit**" button **only once** and wait until you receive a **confirmation** message on the top of your screen. You will be immediately redirected on the "List of cases" page so that you can continue directly with the next case, as shown below:

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3D Liver Visualisation and Volumetry CT Software

LiverVisior 3D Liver Visualis	ation and Volume	try CT Software	Home	About	Team							
Home » Memb	ers Portal » Click	on each case b	elow to access it	s information								
·												
We have received your submission. Thank you! Please proceed with the next case.												
Click on e	ach case b	elow to acc	cess its inf	ormation								
		0 07 54	0									
Cases 1-18	Cases 19-36	Cases 37-54	Cases 55-72	Cases 73-90	Cases 91-10							
Case 1	Case 19	Case 37	Case 55	Case 73	Case 91							
Case 2	Case 20	Case 38	Case 56	Case 74	Case 92							
Case 3	Case 21	Case 39	Case 57	Case 75	Case 93							
Case 4	Case 22	Case 40	Case 58	Case 76	Case 94							
Case 5	Case 23	Case 41	Case 59	Case 77	Case 95							

7 If for any reason you would like to access the list of your previous case submissions, please click on the "My submitted cases." link available on the "Members Portal" menu bar. Alternatively, you may access your previous submissions by simply following the link below: <u>https://livervision.org/?q=node/14/submissions</u>

LiverVi 3D Liver V	i <b>sion.org</b> /isualisation and Volv	umetry CT Software	Home A	About	Team	Protocol	Instructions	Members Po	ortal Contact			
Home » Members Portal » Submissions for Member												
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1	Case 1	Right with MHV		29/04/20	018 - 20:32		29/04/2018 - 20:32		view edit			
Copyright	Copyright © 2018,LiverVision.org Developed by Dimitri Raptis											

This link to your previously submitted cases is also available at the top of the submission form, as soon as you have submitted at least one case, as shown below:



8

3D Liver Visualisation and Volumetry CT Software

Then you will be provided with the list of cases (only the ones that you have submitted) where you may view or edit again.

Please make sure you save your changes by clicking on the "**Submit**" button at the end of the page.

9 If you would like to log out from the platform then click on the home page and you will find the button at the end of the page as shown below:

Protocol Study the protocol carefult Click here		Instructions Contact us if something not clear. Click here						Acce				
			Get s	tarte	d		Log	out				
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Copyright © 2018,LiverVision.org											Developed by	Dimitri Raptis

10 If you have any **questions** or something is **not clear** regarding the study design, protocol or DEMS, please contact **Dimitri Raptis** by using our **online contact form** or by contacting him **directly** (by email: draptis@btinternet.com or mobile / +447584560889).