

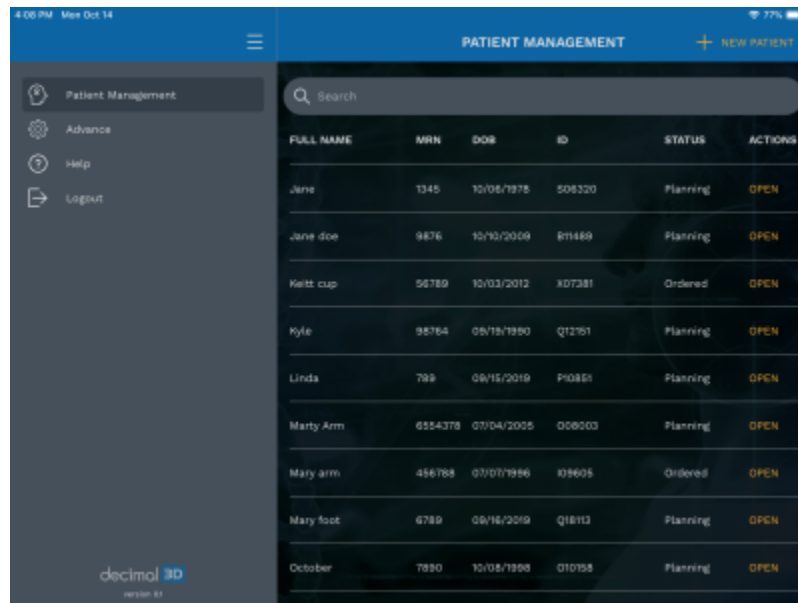
# Electron Block Walk-through Tutorial

This walk-through is intended to be an easy to follow step-by-step guide for completing a “standard clinical electron” set-up. It covers all steps involved in designing and ordering an electron aperture from .decimal. The intent is that after completing this walk-through you will have gained the knowledge and understanding necessary to complete a clinical electron set up utilizing the decimal3D App (it should be noted that the values provided herein are not intended to represent clinical guidelines and should in no way be considered a recommendation for values that are appropriate for clinical use).

1. Have the physician outline the desired treatment area on the patient's skin using a marker or pen with high color contrast
2. Bring the patient to the simulator or treatment room and place them in the desired treatment position
3. Open the decimal3D app on the iPad and login with your unique username and password. The username and password is the same as what is used to sign in to p.d.



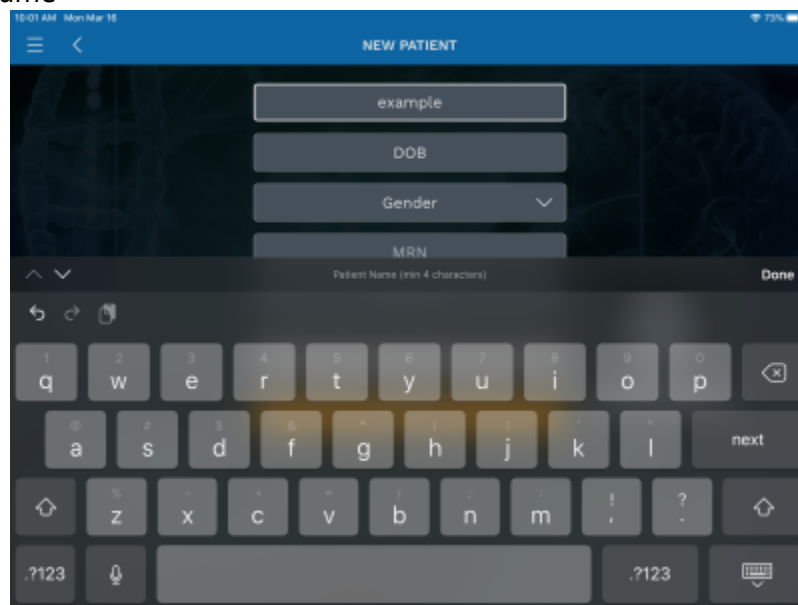
4. Select *New Patient* in the top right hand of the Patient Management Screen



The screenshot shows the 'PATIENT MANAGEMENT' screen. On the left is a sidebar with navigation options: Patient Management, Advance, Help, and Logout. The main area features a search bar and a table of patients. The table has columns for FULL NAME, MRN, DOB, ID, STATUS, and ACTIONS. The data rows are as follows:

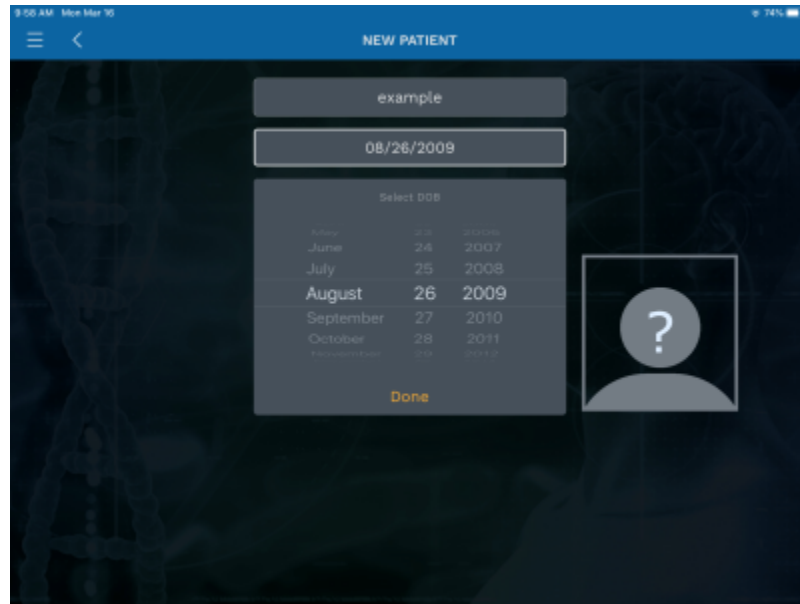
FULL NAME	MRN	DOB	ID	STATUS	ACTIONS
Jane	1345	10/05/1975	505320	Planning	OPEN
Jane doe	9876	10/10/2009	811489	Planning	OPEN
Keltt cup	56789	10/01/2012	X07381	Ordered	OPEN
Kyle	98764	09/19/1990	Q12791	Planning	OPEN
Linda	789	09/15/2019	P10851	Planning	OPEN
Marty Arm	6554378	07/04/2005	008003	Planning	OPEN
Mary arm	456788	07/07/1996	096005	Ordered	OPEN
Mary foot	6789	09/16/2019	Q18113	Planning	OPEN
October	7890	10/05/1998	010798	Planning	OPEN

5. Enter the *Patient Name*



The screenshot shows the 'NEW PATIENT' form. It has a dark blue header with a back arrow and the title 'NEW PATIENT'. Below the header are four input fields: 'example', 'DOB', 'Gender' (with a dropdown arrow), and 'MRN'. A keyboard is visible at the bottom, with the text 'Patient Name (min 4 characters)' and a 'Done' button at the top right of the keyboard area.

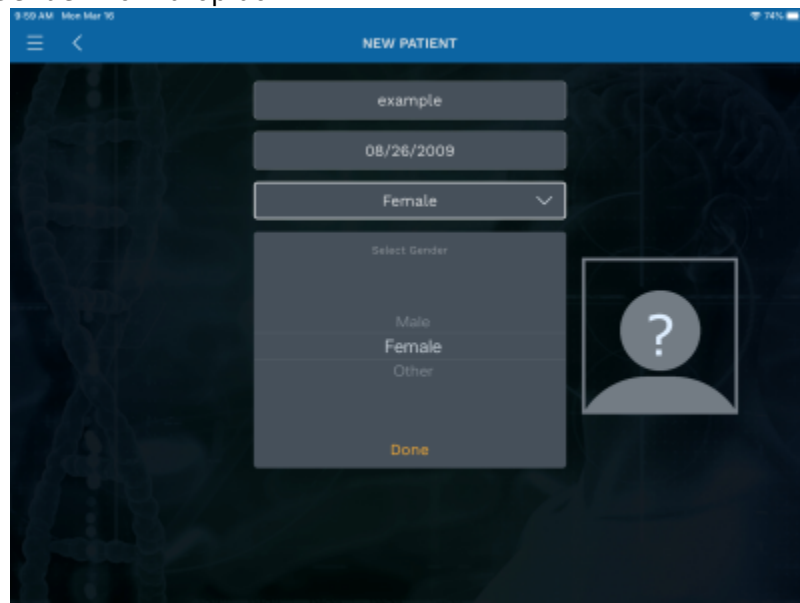
6. Enter the *Date of Birth*



The screenshot shows the 'NEW PATIENT' form with the following fields filled: 'example' in the name field and '08/26/2009' in the date of birth field. A modal titled 'Select DOB' is open, displaying a table of months and years. The 'August 26 2009' option is highlighted. A 'Done' button is at the bottom of the modal. To the right of the modal is a placeholder for a patient photo, represented by a circle with a question mark above a person silhouette.

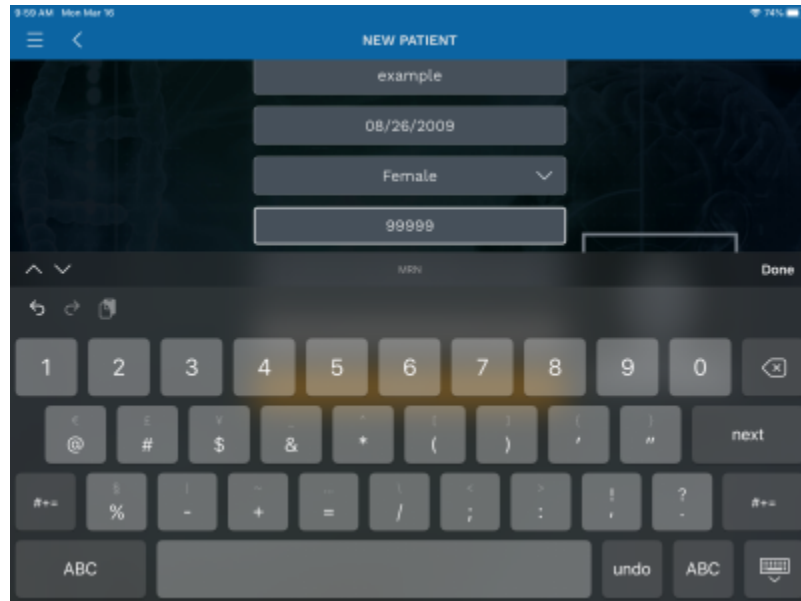
Month	Day	Year
May	23	2006
June	24	2007
July	25	2008
August	26	2009
September	27	2010
October	28	2011
November	29	2012

7. Select the patient *Gender* from drop down



The screenshot shows the 'NEW PATIENT' form with the following fields filled: 'example' in the name field, '08/26/2009' in the date of birth field, and 'Female' in the gender dropdown menu. A modal titled 'Select Gender' is open, displaying three options: 'Male', 'Female', and 'Other'. The 'Female' option is selected. A 'Done' button is at the bottom of the modal. To the right of the modal is a placeholder for a patient photo, represented by a circle with a question mark above a person silhouette.

8. Enter the *MRN* (Medical Record Number)



NEW PATIENT

example

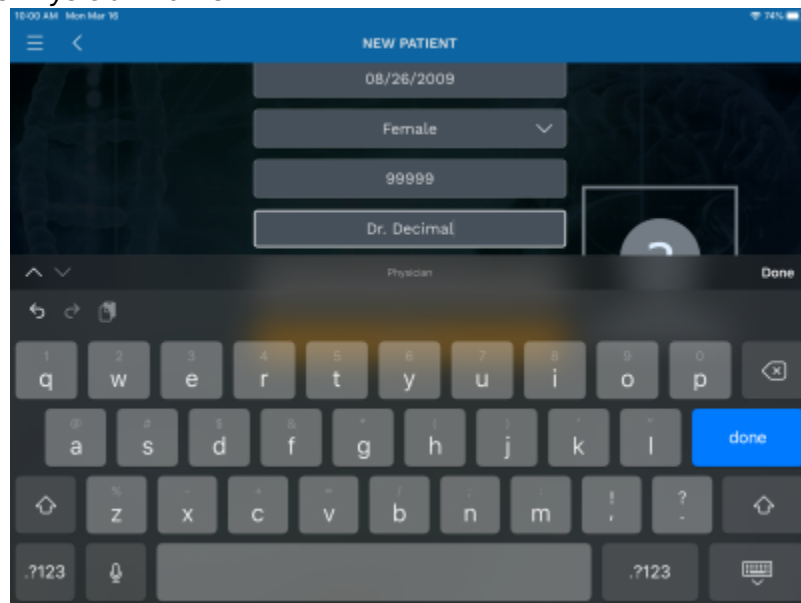
08/26/2009

Female

99999

Done

9. If desired, enter the *Physician* name



NEW PATIENT

08/26/2009

Female

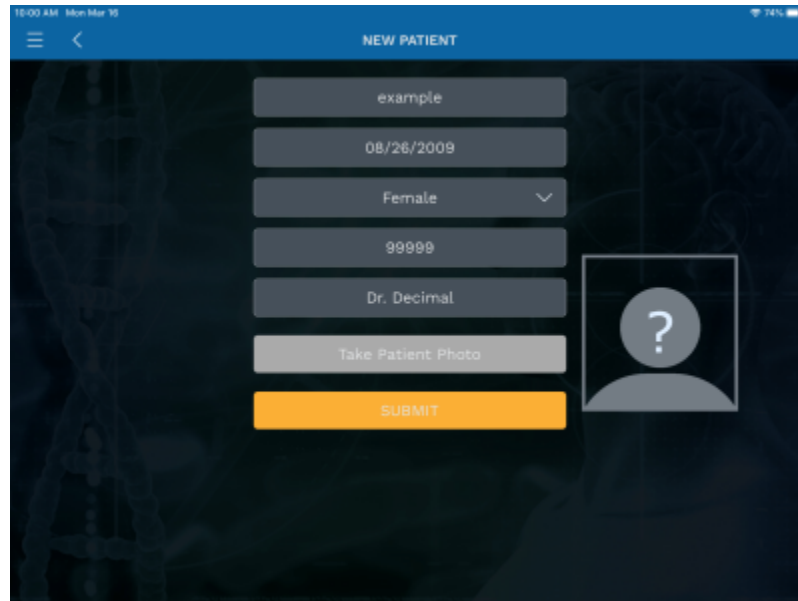
99999

Dr. Decimal

Physician

Done

10. Press *Submit* and the patient record will be created



NEW PATIENT

example

08/26/2009

Female

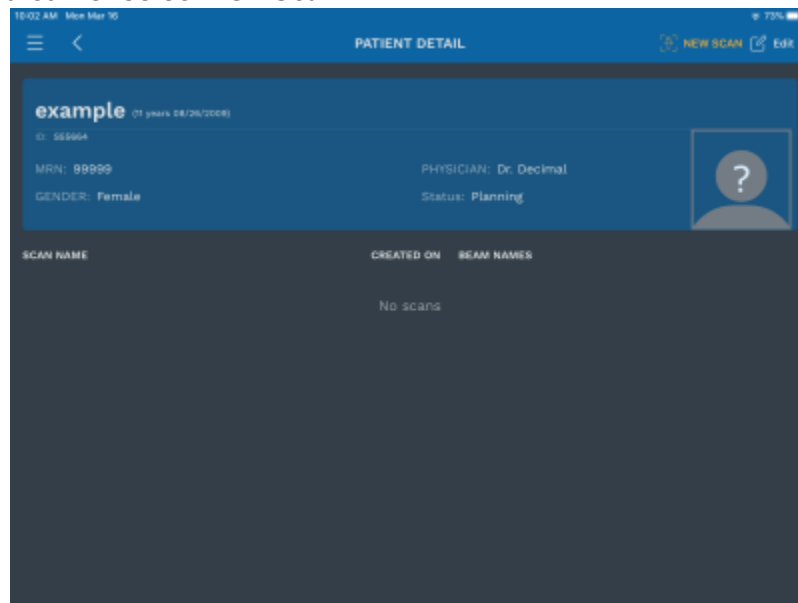
99999

Dr. Decimal

Take Patient Photo

SUBMIT

11. In the top right hand corner select *New Scan*



PATIENT DETAIL

example (1 years 08/26/2009)

MRN: 99999

GENDER: Female

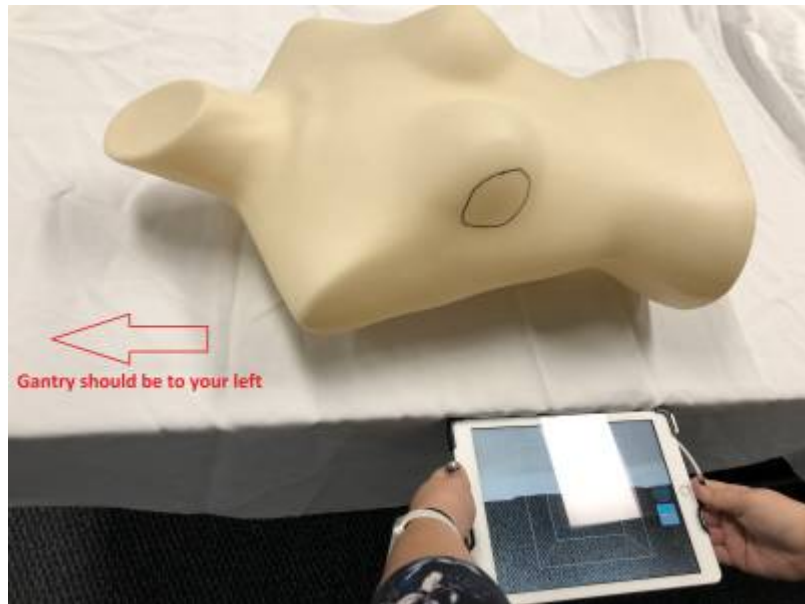
PHYSICIAN: Dr. Decimal

Status: Planning

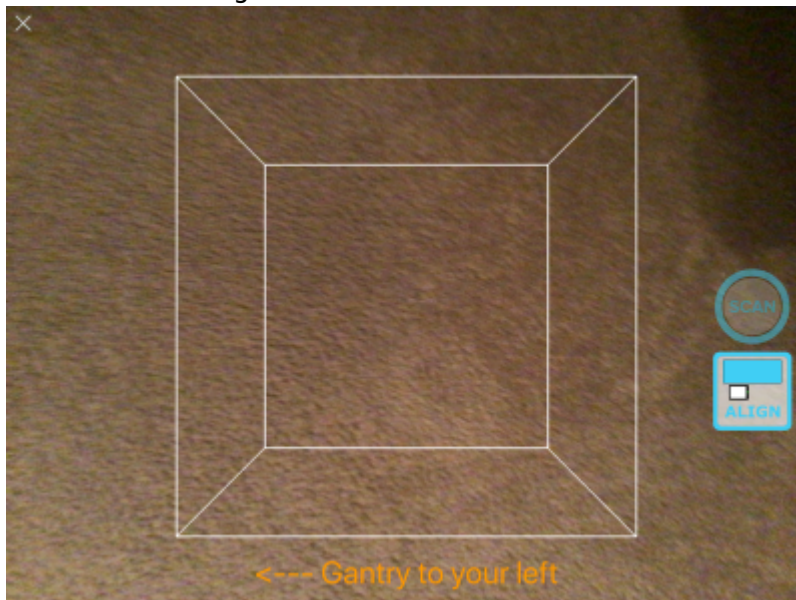
NEW SCAN Edit

SCAN NAME	CREATED ON	SCAN NAMES
No scans		

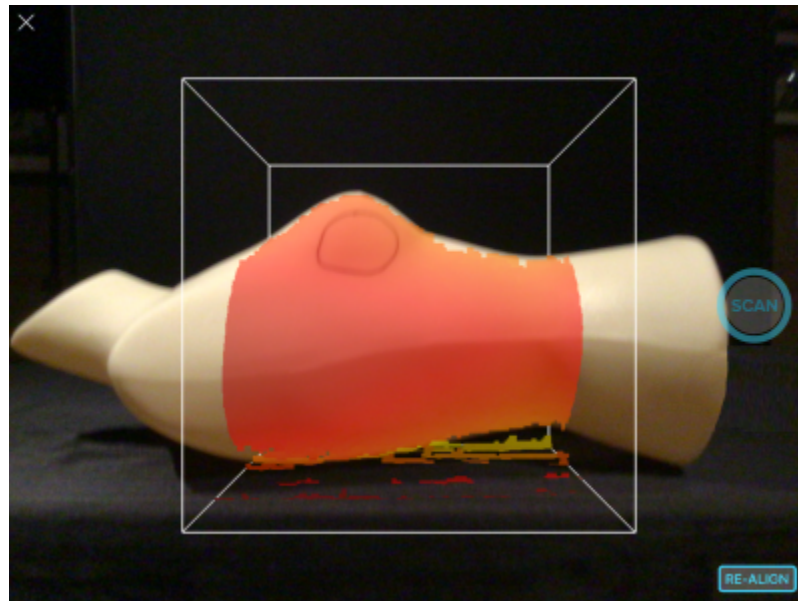
1. Before starting the scan, you must align the iPad to the treatment table so that couch and gantry angles can be accurately determined
2. To perform this alignment, simply hold the iPad against the edge of the treatment table (with the gantry toward YOUR LEFT and the iPad parallel to the floor) and press the *Align* button as



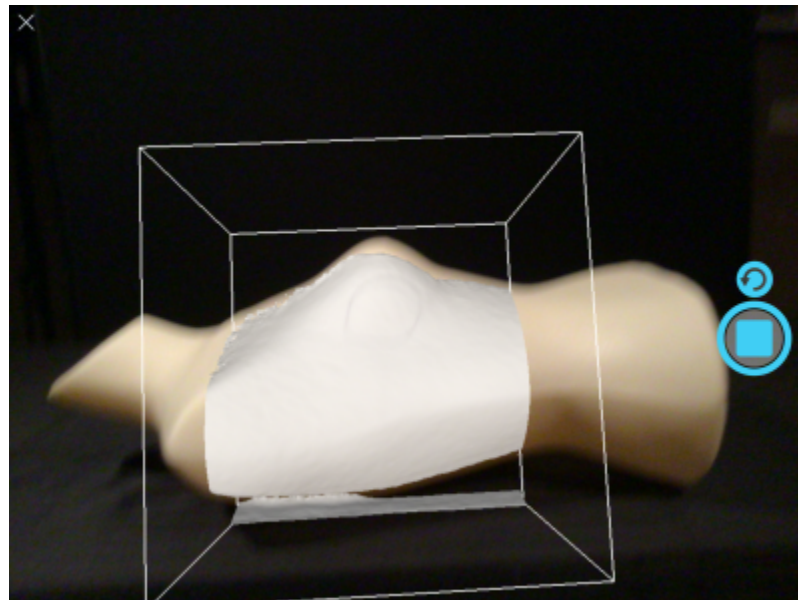
shown in the images below



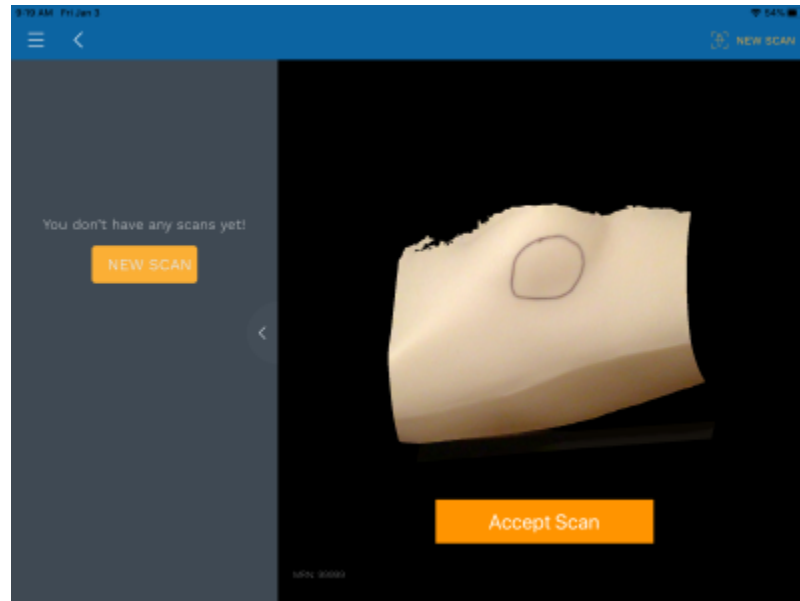
3. You are now ready to scan the patient. Focus the scanner on the area to be scanned. Adjust your distance from the patient to ensure the entire area to be scanned appears in RED (red indicates an ideal scan distance, yellow is slightly too far away, and if no color is shown, you are too close to the patient). The ideal distance is about half a meter (18 to 24 inches).
4. The box shown in the app can also be adjusted to control the size of the area to be scanned. Only areas fully within the box will be captured during the scan, so you can use a two-finger pinch to shrink or expand the box as needed for the field size at hand.
5. Once you are correctly positioned, press the *Scan* button to begin capturing data.



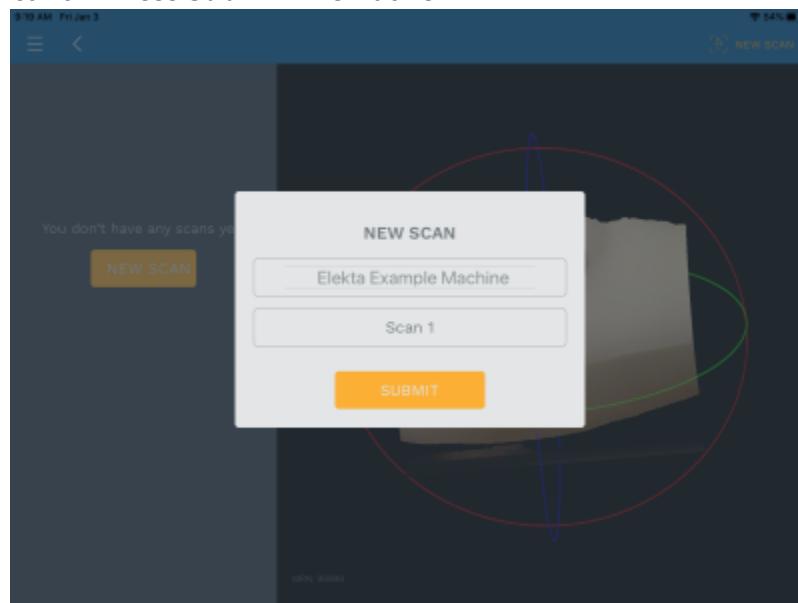
6. While the scan is active, the area that has been fully captured will appear white. You should continue scanning until the entire desired area is shown in white. For relatively smooth or flat areas, the scan can be obtained within 1-2 seconds without moving the iPad, but for larger or highly curved areas, you may need to slowly move or rotate the iPad to capture the entire patient surface.



7. Press the *Scan* button again to complete the scan.
  1. The decimal3D app now automatically begins processing the scan depth and color data to produce the colorized 3D model
12. Once the scan is done processing review the resulting model
  1. If the scan is acceptable select *Accept Scan*

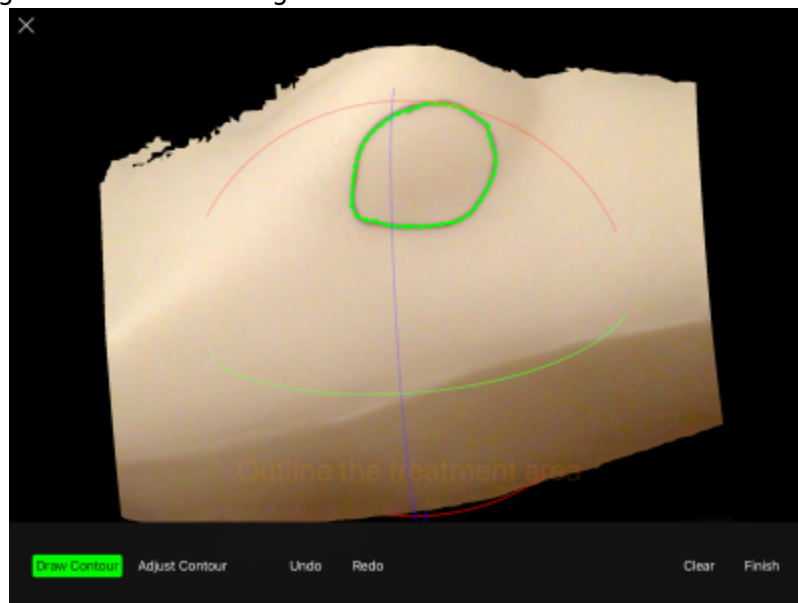


2. If the scan is not acceptable select *New Scan* button on the left-hand side to discard this scan and start a new scan
13. Choose the desired treatment machine from the scroll selector and edit the name of the scan if desired (by default scans are labeled with sequential numbers, e.g. *Scan 1*). Scan names are used only as a convenience for users to locate scans within a patient and are not used for any other purpose in the application. Press *Submit* when done.

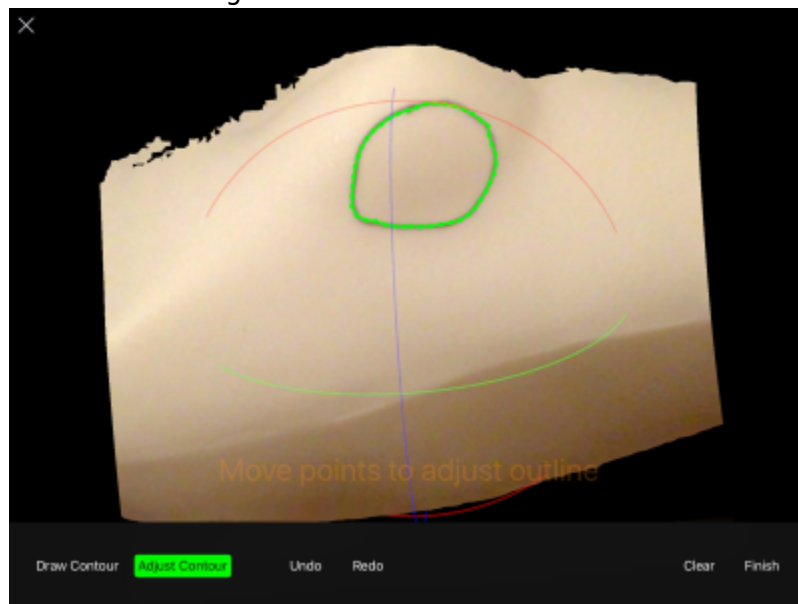


14. Your scan is now saved and you are ready to digitize the treatment field
15. Select *New Contour*
16. You should now rotate, pan, and zoom the display to provide a good view of the treatment field
  1. Rotate by using a single finger drag in any direction
  2. Pan by using a two finger drag in any direction
  3. Zoom by using a two finger pinch motion anywhere in the display
17. Now you will trace the physician drawn treatment field directly on the 3D patient model using either the Apple Pencil or your finger
  1. To start drawing dwell on the scanned image at the desired start point for a full second, then continue drawing the entire treatment area as a single closed contour. Continue drawing until the contour is closed back at the original start point (the contour will change colors to

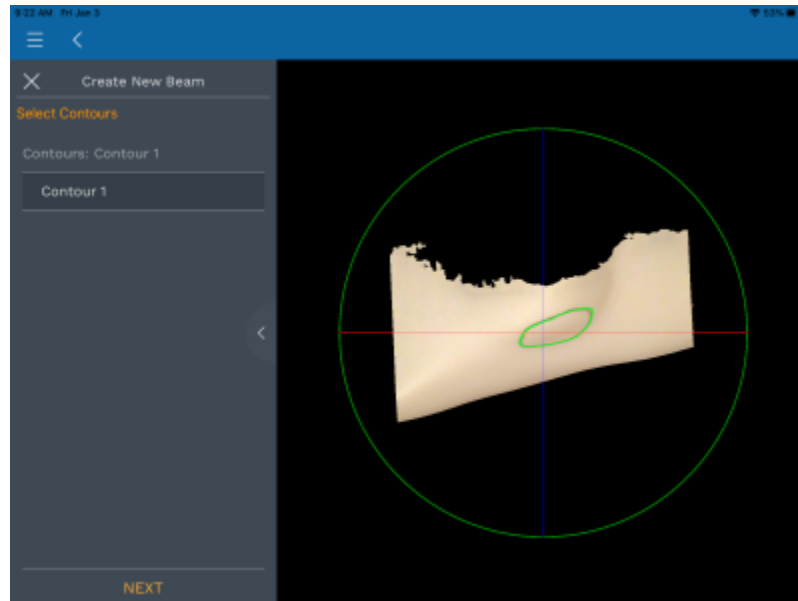
indicate it is now complete). If you lift the pencil/finger before closing the contour you can continue by dwelling again for one full second at a point near where you left off with the previous drawing and then continuing onward.



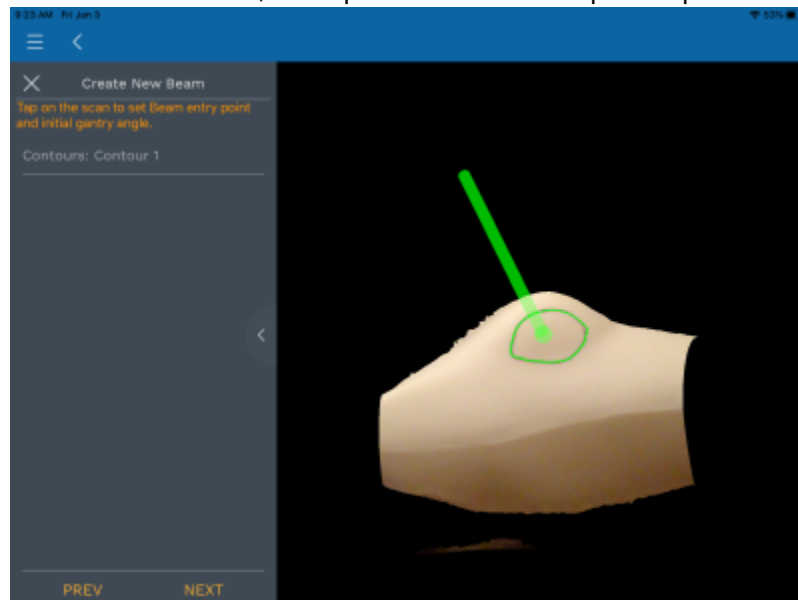
2. Once you have closed the contour, the application will automatically switch to the *Adjust Contour* mode. In this mode you can move points by placing the Apple Pencil or finger on a point, dwelling for one second, and then sliding it to a new position. There are also tools to undo edits and clear all to start again if needed.



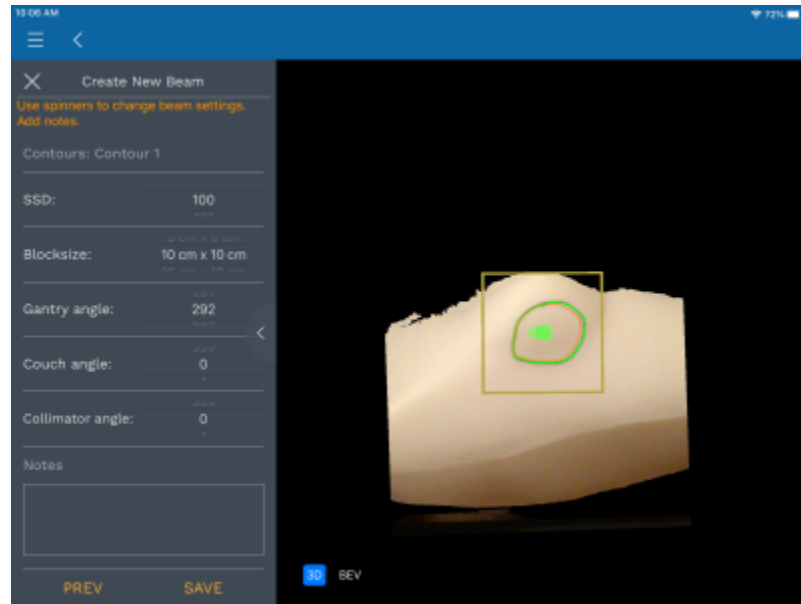
3. Once you're satisfied with the contour select the *Finish* button. Provide a name for the contour (or leave the name at the default) then press *Submit* to save the contour.
18. You are now ready to create your electron aperture by specifying the treatment beam parameters (the application will automatically enter the beam creation task when the contour is completed).
19. The first step in defining the beam is to select the contours to use for the aperture projection (note the contour is automatically selected when this task is started). Press the *Next* button to accept the contour selection.



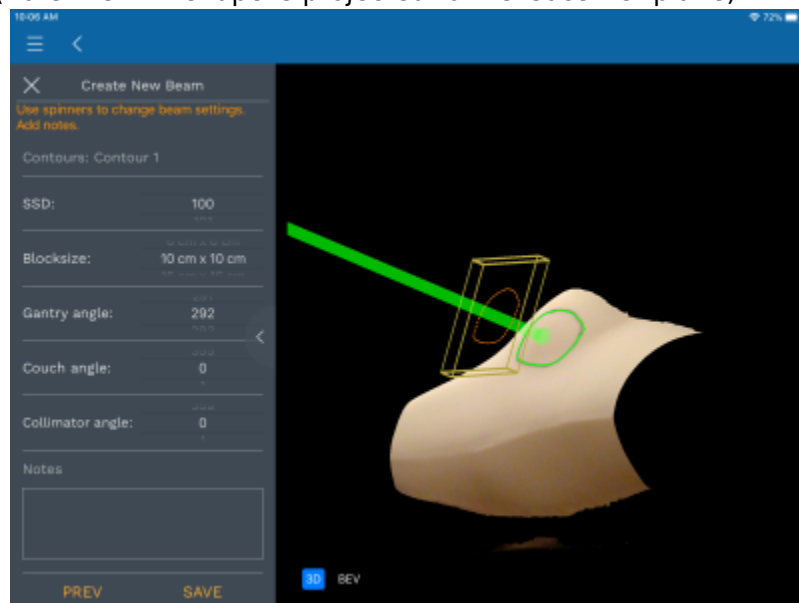
20. Now you will set the beam entry point by tapping on the patient model at the desired location. Tap again to change the location if needed, then press *Next* to accept this position



21. You are now presented with all the remaining parameters needed to fully define the desired treatment beam.
1. These include: SSD, Applicator Size, Gantry Angle, Couch Angle, and Collimator Angle (note: as of v1.7 SSD now includes a second input that allows SSD setting to 0.1cm resolution)
  2. Adjust the parameters as needed to meet the clinical needs of the patient at hand.



1. You may also wish to rotate the model to ensure an appropriate treatment angle has been selected (and to check for possible collisions of the applicator with the patient). You can also switch to a Beam's Eye View (BEV) where you can view and measure the block shape (note the BEV shape is projected to the isocenter plane).



3. Once you're satisfied with the beam and block (cutout) press the Save button. You will be prompted for a beam name. This name will be engraved on the actual cutout during manufacturing, therefore you should provide a meaningful beam name before pressing *Submit*.
22. You are now ready to order the cutout by pressing *Order* in the top right hand corner.
1. All available cutouts are automatically selected for ordering and the engraving data for each cutout is shown at the top of the order page.
  2. Select a shipping priority, review the Shipping and Billing Address information, and press *Order* to securely transmit your order information to .decimal for the cutout to be manufactured.

3. Wait for 30-60 seconds to receive a confirmation of successful order.

23. Once your order has been placed, the DICOM Export option will become available. Simply click the "Send" icon in the top right corner (see red circle below) and your treatment device information will be sent to your preconfigured DICOM receiver via a DICOM RT Plan file.



24. If you encounter any difficulties or problems contact our customer service team at 1.800.255.1613

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Last update: **2021/07/29 18:23**

