

1

Turn on the BladderScan BVM 9500 by pressing the POWER ON/OFF button.



2

Select the exam mode

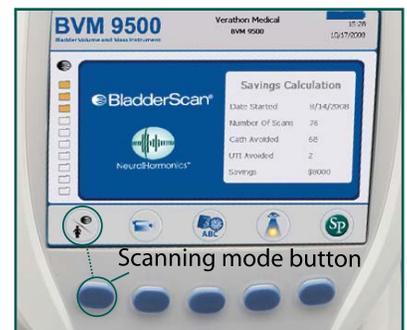
Press the MODE button to toggle between male and female modes:



When the female icon is displayed, the BVM 9500 assumes the patient is a female who has not had a hysterectomy.



Select to measure bladder volume on male patients, or female patients who have had a hysterectomy.



3

With the patient supine, apply gel

Have the patient lie in the supine position with abdominal muscles relaxed.

Palpate the patient's symphysis pubis (pubic bone). Place an ample quantity of gel (with as few air bubbles as possible) midline on the patient's abdomen, approximately one inch (3 cm) above the symphysis pubis (pubic bone).



4

Aim toward the bladder

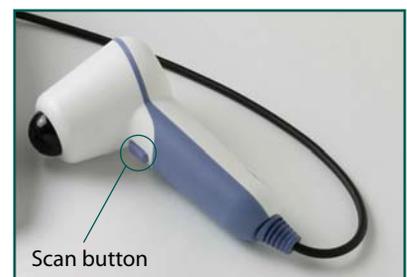
Standing at the patient's right side, place the Probe on the gel and aim toward the expected location of the bladder. For most patients, this means angling the Probe slightly toward the patient's coccyx (tailbone) so the scan clears the pubic bone.



5

Press and release the SCAN button

Press and release the SCAN button, located on the underside of the Probe. As the scan progresses, sections of the bladder will appear on the Console screen. When you hear the end-scan tone, the scan is complete.



6

Interpreting scan results

If the scan is **"on target"** the Probe will display eight flashing arrows. On the Console, the bladder will appear in the center of the crosshairs.



To measure Ultrasound-Estimated Bladder Weight (UEBW), the patient's bladder volume must be between 150 ml and 400 ml. Bladder volumes outside this range will return a reading of "--g" for UEBW. A successful scan of bladder volume and UEBW is shown (Image 1).



Image 1: On-target scan

6a

If the scan is off-target

If the scan is **"off target"** the Probe will show an arrow indicating the direction to move the Probe to be "on target." On the Console, the bladder will not be centered in the crosshairs, and there will be an arrow pointing in the direction for re-aiming (Image 2).

- If the arrow on the Probe is flashing, you are significantly "off target"
- If the arrow on the Probe is solid, you are slightly "off target"

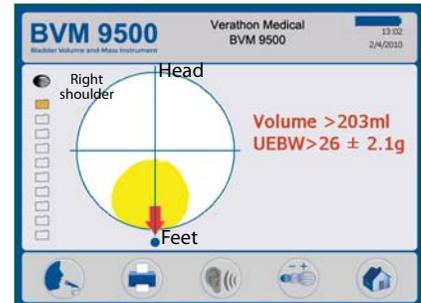


Image 2: Off-target scan

6b

To re-aim

- Adjust the angle of the Probe so the scan head (black tip) moves in the direction of the arrow, or
- Make small movements of the Probe—approximately 0.5 in (1 cm) in the direction of the arrow—until the scan is "on target"

Please note that the crosshairs correspond to the anatomy of the patient as follows:

- The small dot at the base of the crosshairs represents the feet of the patient.
- The top of the crosshairs represents the patient's head.
- The upper left quadrant represents the patient's right shoulder.

This orientation should help you adjust your aim to center the bladder fully in the ultrasound cone.

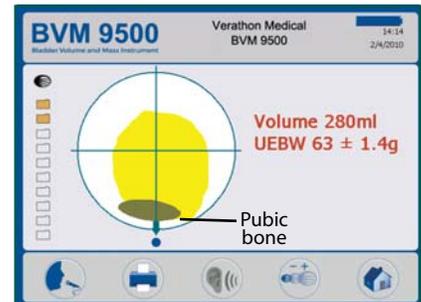


Image 3: Pubic bone obscuring bladder

6c

Pubic Bone

You may also see a display indicating that the pubic bone is inside the ultrasound cone. If this occurs, you should re-aim and re-scan (Image 3).

Although the bladder may be shown as centered in the ultrasound cone, and your measurement may be complete, there is a possibility that the pubic bone is obscuring part of the bladder.

By re-aiming and re-scanning, you can ensure you have captured the bladder fully inside the ultrasound cone.

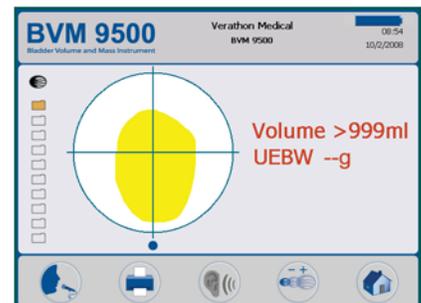


Image 4: Bladder volume > 999 ml

6d

If the bladder volume is greater than 999 ml, the display shows > 999 ml (Image 4).

6e

To make a manual measurement of Bladder Wall Thickness, select the Manual Measurement function on the Results screen and consult the User's Manual for detailed instructions (Image 5).

7

Interpreting UEBW Measurement Data

A standard deviation value indicating the UEBW measurement confidence is displayed as a +/- range (Image 5).

In some cases, the UEBW measurement will be expressed as an approximate value, using a ≈ symbol. This means that the measurement is an approximate result only and you should re-aim and re-scan to get a more accurate reading (Image 6).

The table below provides guidance on interpreting data displayed on the Results screen.

Interpreting Results Screen UEBW Measurement Data

Aiming Arrow Present?	UEBW measurement symbol	Recommended Action
No	=	Accept UEBW measurement
No	≈	Adjust Probe pressure and/or Probe angle and scan again. Depending on patient anatomy, it may not be possible to get an = sign.
No	>	Bladder volume is too large for UEBW measurement
Yes	≈	Angle Probe in direction of arrow on Probe screen, or move Probe no more than 1/2 inch (1 cm) in direction of arrow; scan again
Yes	>	Angle Probe in direction of arrow on Probe screen, or move Probe no more than 1/2 inch (1 cm) in direction of arrow; scan again



Image 5: Measuring UEBW

Manual Measurement

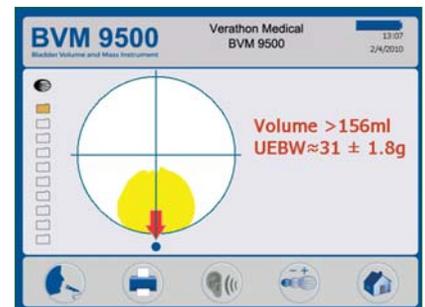


Image 6: Approximate UEBW Value

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Additional Scanning Tips

When measuring bladder volume and UEBW, it is VERY IMPORTANT to hold the device steady while scanning. Avoid changing position, angle or pressure.

Applying too much pressure when scanning may lead to a Greater Than (>) symbol preceding the measurement on the screen. If this happens, apply less pressure and re-scan.

To ensure accurate results, make sure that:

- You use a sufficient amount of ultrasound gel and ensure there are no air gaps between the Probe and the patient's skin.
- You are holding the Probe steady while scanning (avoid changing position, angle or pressure).
- You are using enough pressure to maintain good skin contact until the scan is complete.
- There is not a catheter in the patient's bladder. The presence of a catheter may affect the accuracy of the bladder volume measurement, but the measurement may still be clinically useful (for example, detecting a blocked catheter).

9

Save, review and print exam results.

9a

Voice annotate and save exams.

- **To save the exam** you must record a voice annotation.
- **To annotate**, press and release the Record button on the Console. When you see the Record button icon change to a Stop button icon, record the patient information by speaking into the Probe microphone. Press the Stop button when you are finished speaking. When the hourglass icon disappears, press the Listen button to replay the annotation.
- **To print** exam results via the onboard printer, press the Print button.



9b

Review saved exams.

- **To review** previous exam records, press the Review button. On the Review screens, the user can review all currently saved exams and can print, replay voice annotations, or delete exams.

Review Screen 1 shows the bladder volume measurements. Pressing the Return button displays **Review Screen 2**, which will show:

- Bladder Surface Area
- Ultrasound Estimated Bladder Weight (V-Mode)
- Ultrasound Estimated Bladder Wall Thickness (V-Mode)

If manual measurements were taken, then two additional measurements will be displayed:

- Bladder Weight (Manual)
- Wall Thickness (Manual)

- **To perform** another exam, press the Home button.



Listen Review



Review Screen 1

Return Delete

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Finish the exam.

Once you have completed the scan, wipe the ultrasound gel off the patient and the Probe. For ScanPoint[®] subscribers, logging onto the ScanPoint application automatically transfers and saves your annotated exams to your Windows[®] computer.



Review Screen 2

To order additional rolls of paper (0800-0319) or batteries (0400-0066), contact Customer Care at 800.331.2313.

verathon.com <https://my.scanpoint.com>

For more information, call 800.331.2313 (in the U.S. and Canada) or contact your local Verathon Medical representative.

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