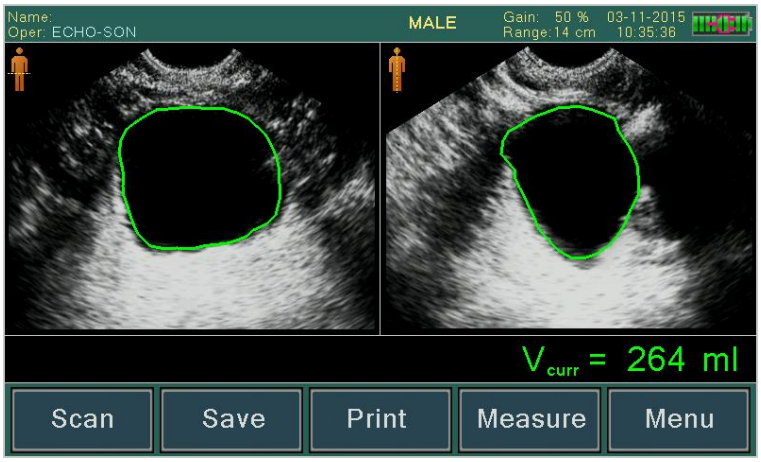
PINIT BV- *volumetric ultrasound scanner* – tool4vol

Recent, modern devices for bladder volume measurement use different methods for determining biometric data and calculation of the final results. There are a lot of biological and physical factors that affect final results, and for that reason all methods (even multi-plane 3D etc) are laden an error near-by 20-25%.

Echo-Son would like to introduce the volumetric tool for bladder content measurement – PINIT – which offers in fact four methods (algorithms) /**tool4vol**/ as a very universal and common solution. Our PINIT empowers volume measurement of a bladder and additionally another organs as kidneys, papilloma, testes, prostate gland etc. and their dimensions as well.

There are the unique features of our **tool4vol** PINIT:

<table>
<tr>
<td> 
</td>
<td><u>1.Basic method – automatic</u>
Single- click and after
2 seconds the result is displayed.
Calculation via known empiric formula based on research by Rageth and Langer.
Volume is calculated using areas of 2 perpendicular plane of bladder marked in green on the scanned images.</td>
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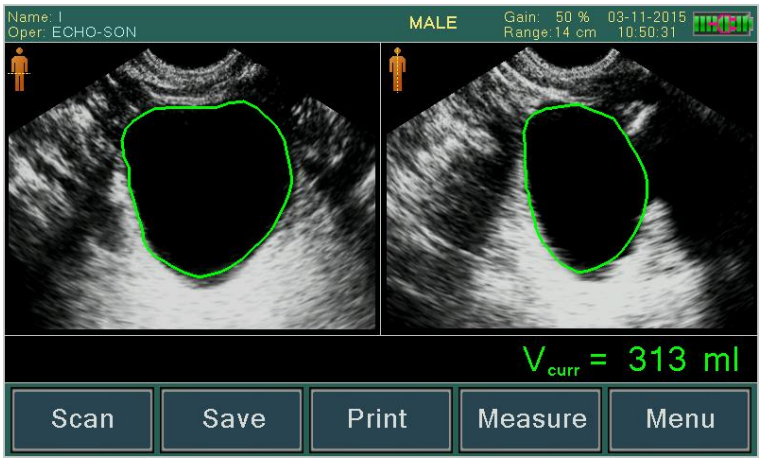
<tr>
<td> 
</td>
<td>If obtaining the corrected areas is difficult by automatic procedures, PINIT offers two semi-automatic planimetric methods:
2. Contour (trace)
Contouring area (outline) by free-hand drawing - and then calculating the bladder volume.</td>
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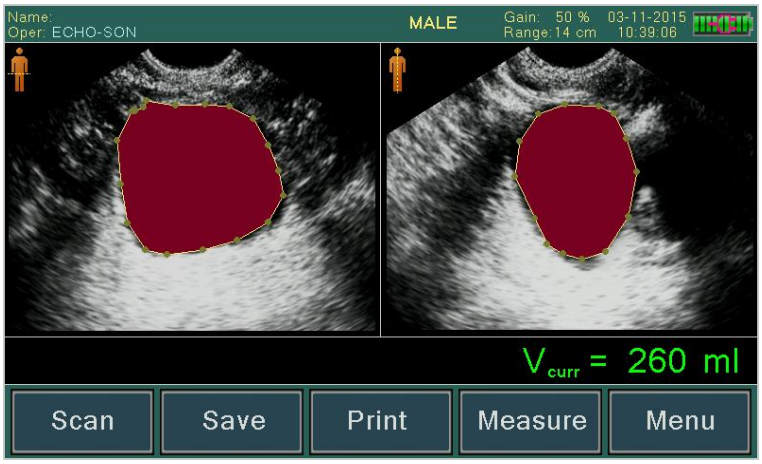
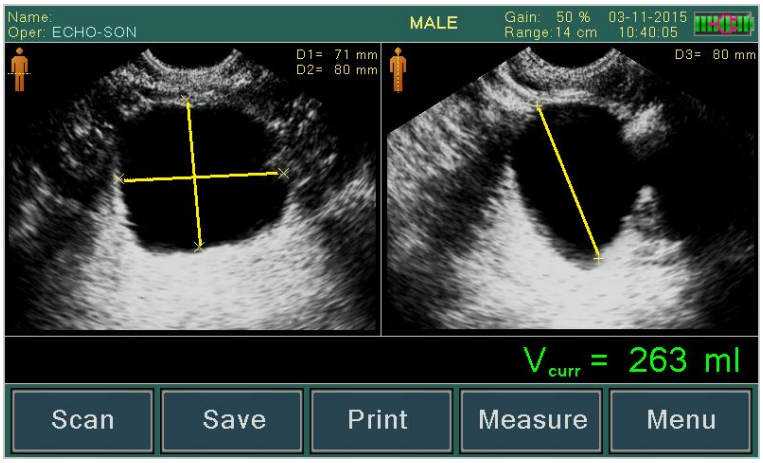
</table>



3. MultiPoint

Contouring area (polygon) by free-hand point setting – and then calculating the bladder volume



4. 3-Axis (HWL)

For verifying and checking above automatic and semiautomatic measurements PINIT offers traditional, well known method used in all ultrasound scanners for more than 35 years. It is **3-axis** (elliptical kind) method known as well as **HWL** (High_Width_Lenght).

This method could be used for other organs like kidney, prostate etc.

The advantage of the PINIT is the mode of operation as the **2D** ultrasound scanner (256 grey scale) for purpose for diagnostic exams of abdominal, pelvic floor, urinary duct, prostate etc with typical measurements (distance, volume) of organs or morphological lesions.