Look Beyond the Surface and Get the Complete Pelvic Floor Picture

Endovaginal ultrasound. Levator ani defect seen on the right side (arrows). A=anus, B=bladder, LA=levator ani, U=urethra.

The World Leader in Pelvic Floor Ultrasound Imaging

- Advanced Imaging Technologies for Suberb Image Quality
- Dynamic Real-Time Examination During Squeeze and Valsalva Maneuvers
- Excellent Visualization of Tape and Meshes
- Manipulate 3D Data to See Structural Details in the Best Plane
Our unique solutions let you examine structures and defects from all angles, to gain insight into the condition of all parts of the pelvic floor.

“[The multicompartment method] allows us to evaluate the patients with pelvic floor dysfunctions in order to decide the most appropriate management and also to assess the results after surgery.”

Giulio Santoro, MD, PhD (colorectal surgeon)

“I finally found doctors who look at the whole picture. Before, I went from one to another, never getting coordinated treatment. I feel as if I’ve got my life back.”

“Any physician or practitioner who treats the patient should incorporate pelvic floor ultrasound into the clinical examination before deciding on a plan of treatment.”

Marianne Starck MD, PhD (colorectal surgeon)

Visit the pelvic floor section of bkmed.com to download clinical notes by different medical specialists, explaining how and why they use the multicompartment method in their practice, including guidelines for performing a multicompartment examination. You will also find a list of references to relevant journal articles.

Ultrasound images courtesy of Dr. S. A. Shobeiri, University of Oklahoma Health Sciences Center, USA, Dr. G. A. Santoro, Regional Hospital, Treviso, Italy, and Dr. A. P. Wieczorek, Skubiszewski Medical University of Lublin, Poland. All images obtained on a Pro Focus 2202 UltraView system.
Pelvic floor structures are complex, so dysfunctions often involve more than one part of the anatomy.

Getting the full picture can be critical for:
- Finding the causes of dysfunction
- Planning treatment
- Evaluating outcomes

Why ultrasound?
- Dynamic real-time examination to observe structures during squeeze and Valsalva maneuvers
- Excellent visualization of tape and meshes
- Immediate, definitive results

What is multicompartment imaging?
Using ultrasound with a combination of transducers to image all compartments of the pelvic floor:
- Anterior (bladder and urethra)
- Middle (vagina and uterus)
- Posterior (rectum and anal canal)

Why endocavity imaging?
- With high resolution ultrasound, you can see the fine anatomic details of even deep pelvic floor structures

Why high resolution 3D?
- Image, store and compare detailed anatomic information in precise high resolution 3D data cubes
- Manipulate the 3D data to see structural details in the best plane
- Get visual confirmation of precise position of tapes and meshes

How long does it take?
- Less than 20 minutes, for an experienced physician

What are some conditions that can be evaluated?
- Pelvic organ prolapse
- Urinary and fecal incontinence, obstructed defecation
- Voiding dysfunction
- Pelvic, vaginal, or anal pain
- Recurrent urinary tract infections
- Pelvic floor dyssynergy

“There’s a real-time nature to the interaction with the patient... With ultrasound imaging, we can confirm the diagnosis at the initial visit, choose the surgical date and discuss treatment, all in the same day.”

Elizabeth R. Mueller MD, MS, FACS (urogynecologist)
Transperineal ultrasound imaging with the excellent penetration and contrast resolution of the 8802 convex array transducer gives a comprehensive overview of the pelvic floor anatomy and lets you make initial measurements of anatomic structures.

**Use a sagittal view to visualize:**
- Urethral hypermobility
- Cystoceles, rectoceles, enteroceles
- Obstructed defecation
- Tapes and mesh
- Bladder neck descent
- Dyskinesia

**Rotate the transducer to the transverse plane to visualize:**
- Sphincter abnormality or urethral rotation

Pelvic floor – normal anatomy in nulliparous patient. Sagittal section, 8802 transducer. SP=symphysis pubis, U=urethra, V=vagina.

Sagittal section. Measurements reflect position of the pelvic floor organs at rest (left image) and during Valsalva maneuver: anorectal angle (red), retrovesical angle (yellow), bladder neck-symphysis pubis distance (BSD) (green).

Sagittal section during Valsalva maneuver. Cystocele is visualized.

Sagittal section. Rectocele visualized during Valsalva maneuver.

Sagittal section showing pelvic organs. Tape is clearly visualized.
High Resolution Endoanal and Endovaginal 3D

Rotate and cut through the high resolution 3D data cube to see areas of interest in the best possible planes and follow the path of abnormalities. Make reproducible measurements.\(^1\)

The 2052 endocavity transducer with built-in, high resolution 3D, has a rotating crystal that sweeps out a 360° ultrasound image. The crystal moves back within the probe to acquire a series of parallel images that create the 3D data cube, as indicated in the drawing. Acquisition is automatic, and no moving parts touch the patient.

Endoanal 3D
- Evaluate the structural integrity of the anal canal, including abscesses, fistulas and sphincter tears
- Follow fistula paths in precise detail
- Visualize anal tumors
- Detect mucosal rectal prolapse

Endovaginal 3D
- Assess pelvic floor asymmetry
- Measure the levator hiatus
- Assess perineal muscles
- Visualize levator ani muscle and attachment to inferior pubic rami

Dynamic Endovaginal Imaging

Image the anterior and posterior compartments with the high resolution biplane 8848 transducer to see anatomical, vascular and functional details. With an external 3D mover, you can also obtain high resolution 3D data cubes.

The two arrays in the 8848 biplane transducer let you see vascularity in detail in both sagittal and transverse image planes. For example, viewing the transverse image while you retract the transducer lets you visualize flow along the length of the urethra.

### Anterior Compartment

- Visualize bladder neck, urethra and other structures
- Assess intussusception, enteroceles and rectoceles
- View tapes and meshes

### Posterior Compartment

- Visualize hemorrhoids and the perineal body
- Measure anorectal angle
- Evaluate RVS (rectovaginal septum) integrity
The revolutionary 8838 endocavity transducer, with both sensitive color Doppler and built-in 3D, is the newest addition to our unique high resolution pelvic floor ultrasound solution. The linear sagittal array rotates automatically to acquire the 3D data cube from a fan of separate images. The transducer’s small diameter minimizes patient discomfort, and no moving parts touch the patient.

2D and Color Doppler High Resolution Imaging
- See motion and flow (color) with superb sensitivity
- Visualize anatomical, vascular and functional details
- Explore the integrity and position of tapes and meshes

Endoanal 3D
- Perform a complete 360° high resolution endoanal 3D study
- Evaluate anal canal integrity
- Assess levator ani integrity
- Evaluate fistula tracts and abscesses
- Detect rectal prolapse and obstruction

Endovaginal 3D
- Perform a high resolution endovaginal 3D study of the complete pelvic floor
- Obtain high resolution images of the rectovaginal space

Visualize blood flow with color Doppler and acquire a 3D data cube for detailed examination and measurements – all with the same high resolution transducer.

Midsagittal view (12 MHz). Bladder and urethra are clearly visualized, and below them, an anterior mesh.

Sagittal section from a 3D image of the posterior compartment. Interior lumen of the anal canal and puborectalis clearly visualized.

Midsagittal section from an endovaginal 360° image (12 MHz). At the top, the anterior compartment with the urethra clearly visualized. Below this, the rectovaginal space, anal canal and puborectalis.

Sagittal endovaginal view of the posterior compartment (12 MHz). Posterior mesh clearly visualized between vagina and anal canal.

Midsagittal section from an endoanal 3D image of the anal canal (12 MHz). Note very clear visualization of internal sphincter.

Sagittal view from an endovaginal image of anterior compartment. Structures surrounding urethra are seen to the right, bladder in the center. Below the bladder, structures between vagina and bladder are seen with very fine details.
Acoustic and Clinical Innovators for over 30 years

Recognized as a global leader in the development of ultrasound systems designed for urology, surgery and pelvic floor, Analogic’s BK Medical offers a versatile range of state-of-the-art imaging systems and dedicated transducers to help enhance diagnostic confidence.

**Pelvic Floor Transducers**

We lead the way in pelvic floor transducers, with the world’s best high resolution 3D image quality and built-in 3D movers, so no moving parts touch the patient.

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**flexFocus 800 and flex Focus 500**

Award-winning, extremely mobile fully featured systems, combining Quantum Technology™ with an intuitive user interface and customizable settings. When coupled with the BK Power Pack, ensures plug-free imaging for up to 4 hours. The premium performance flex Focus™ 800 also offers a choice of interfaces, including a touch screen and remote control.

**UltraView 800**

A fully featured ultrasound system incorporating Quantum Technology, providing high resolution images designed to meet demanding clinical challenges. The system is a work-horse solution for university centers as well as private clinics.

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<td>Italy</td>
<td>Sweden</td>
<td>110 Batterfeld, Great Marlings</td>
</tr>
<tr>
<td>USA</td>
<td>Tel +32 15 200 600</td>
<td>Tel +45 4452 8100</td>
<td>Tel +40 4106 95 55 0</td>
<td>Tel +39 02 96 78 19 65</td>
<td>Tel +46-6-744 02 12</td>
<td>London</td>
</tr>
<tr>
<td>USA</td>
<td>Fax +32 15 291 005</td>
<td>Fax +45 4452 8199</td>
<td>Fax +40 4106 99 55 99</td>
<td>Fax +39 02 96 78 19 65</td>
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<td><a href="mailto:info@se.bkmed.com">info@se.bkmed.com</a></td>
<td>Fax +44 1582 433716</td>
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**analogic**

**Analogic Corporation (Headquarters)**

8 Centennial Drive
Peabody, MA 01960
Tel: +1 978-326-4000
analogic.com

**Analogic Ultrasound (Headquarters North America)**

BK Medical Systems Inc
8 Centennial Drive
Peabody, MA 01960
USA
Tel: +1 978-326-1300
Fax: +1 978-326-1399
info@analogicultrasound.com
analogicultrasound.com

**Analogic Ultrasound (Headquarters Europe and Rest of World)**

BK Medical
Mileparken 34
2730 Herlev
Denmark
Tel: +45 4452 8100
Fax: +45 4452 8199
info@analogicultrasound.com
analogicultrasound.com

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