

36th World Cancer Conference & 3rd Edition of International Conference on **Colorectal Cancer**

October 11-13, 2018 Zurich, Switzerland

New technique for pelvic floor measurement - transperineal dynamic ultrasound measurement method to detection and quantification of rectocele, cystocele, enterocele and perineal Descensus

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The pelvic floor is a complex area, exhibiting diverse pathologies. Among the so-called emptying disorders is the obstructive defecation syndrome (ODS). The diagnosis of the pelvic floor presents us with major challenges, as the anatomy of the region is complicated, and the physiology is often difficult to understand. Previous investigation methods have included MR-defecography, classic defecography, uro-gynecological examinations, proctological examinations, scores etc. Ultrasound examination of the pelvic floor is unlikely to be sufficiently established for some time. The examiner's interpretation dependency and the lack of anatomical landmarks are challenging, which detracts from the significance of the investigation. The aim of this study is to develop a unique and reliable method for the assessment and quantification of all pelvic floor changes from the group of obstructive defecation disorders. This method should be applied to all affected patients regardless of their age, size, weight, whether they suffer from minor diseases, and/or after surgery, and should deliver reliable and unique data. It should provide a diagnosis without any interpretation from the examiner. Material and method: eight clearly defined measuring points were developed which can be found reliable at transperineal sonographic represented pelvic floor. These serve as a basis for the distance measurements in either a supine or a sitting position. The examinations were performed with an ultrasound scanner BK ProFocus ultra view, first supine and then in a sitting position. This resulted in selected measurement points and distances that were found in all the patients, and in both positions. Conversion of the absolute values as percentage changes allows for reliable diagnosis. Our study shows, in conclusion, that the new method of transperineal ultrasound measurement on the pelvic floor (TUMPF) allows a reliable and unambiguous diagnosis in either the supine or the sitting position, whereby dependence on the ultrasound examiner can be avoided.

Compartments	Measurement name	Proceed
Front compartment	1	Measurement
	1a	Measurement
	2	Measurement
	2a	Measurement
Middle compartment	3	Adoption of value of 1
	3a	Measurement
	4	Adoption of value 2
	4a	Measurement
Dorsal compartment	5	adoption value of 1
	5a	Measurement
	6	Adoption of value 2
	6a	Measurement

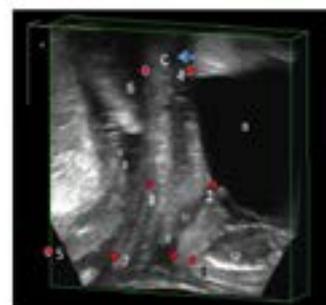


Figure 1 clearly defined measuring points of the transperineal edge of the pelvic floor

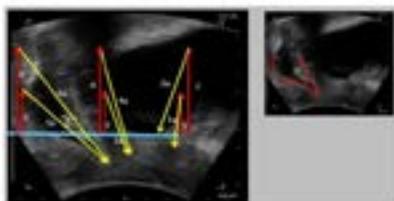


Figure 2 The change in the position of the organs in the various transverse cross-sections (TUMPF) during the sitting position (blue line) and the supine position (red line) of the measured stage.

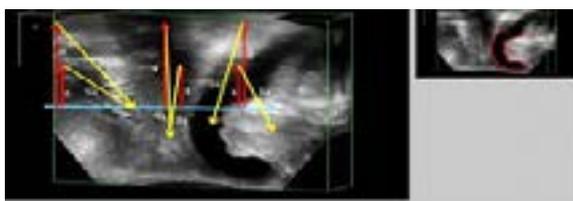


Figure 3 This picture shows the change of the organ during the sitting position (blue line) and the supine position (red line) of the measured stage (TUMPF) during the sitting position (blue line) and the supine position (red line) of the measured stage (TUMPF).

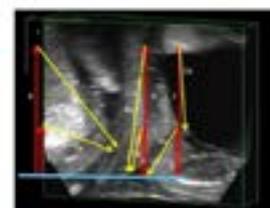


Figure 4 The distance between the pelvic floor measurement line in the sitting position (blue line) and the supine position (red line) of the measured stage (TUMPF).

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Recent Publications

1. Hainsworth A, Collins E, Solanki D, et al PWE-379 The measurement and assessment of rectocele using ultrasound and proctographic Gut 2015;64: A377
2. Beer-Gabel M, Carter D. Comparison of dynamic transperineal ultrasound and defecography for the evaluation of pelvic floor disorders Int J Colorectal Dis. 2015 Jun;30(6):835-41. doi:10.1007/s00384-015-2195-9. Epub 2015 Mar 31.
3. Iacobellis F, Brillantino A, Renzi A, Monaco L, Serra N, Feragalli B, Iacomino A, Brunese L, Cappabianca S, MR Imaging in Diagnosis of Pelvic Floor Descent: Supine versus Sitting Position, Gastroenterology Research and Practice Volume 2016 (2016), Article ID 6594152, 12 pages
4. Luciana P. Chamié, MD, PhD, Duarte Miguel Ferreira Rodrigues Ribeiro, MD, Angela H. M. Caiado, MD, Gisele Warmbrand, MD, PhD, Paulo C. Serafini, MD, PhD Translabial US and Dynamic MR Imaging of the Pelvic Floor: Normal Anatomy and Dysfunction, RSNA January-February 2018 Volume 38, Issue 1
5. Martellucci J, Bruscianno L, The Dynamic Transperineal Ultrasound Era of the Evaluation of Obstructed Defecation Syndrome. Dis Colon Rectum. 2016 Aug;59(8):800-3. doi: 10.1097/DCR.0000000000000586.

Biography

Born in 1974 in Poland Dr. Kowalik accomplished his medical degree at Heinrich Heine University Düsseldorf/Germany in year 2002. In 2006 he finished his dissertation at the same University. Between 1999 and 2002 he improved his skills on the field of surgery and radiology in Germany, Poland, Spain and USA. Since 2007 he was active as assistant surgeon in department of coloproctology of the St Antonius St Josef Verbund in Wuppertal. Medical specialist for surgery, since 2009 Proctology, then senior physician of the department with realm three dimensional EUS. Since 01.01.2012 Dr. Kowalik works in Magen Darm Zentrum Wiener Platz Köln/Germany. Since 2010 Dr. Kowalik regularly organizes certified advance training "3D endo-sonography of the pelvic floor - practical interactive course on the device". The elaboration of the contents for these courses results from collaboration with well-known international experts on the field of pelvic floor and EUS.

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