

APPENDIX A: OUTLINE - LUMBOPELVIC RTUS ASSESSMENT

BLADDER & PELVIC FLOOR RESTING STATE

RTUS - QUALITATIVE ANALYSIS	TRANSVERSE	SAGITTAL
Presence of respiratory motion of the bladder at rest (Y/N)		
Shape & symmetry of the bladder at rest (describe)		
Relationship of the bladder to the pelvic floor (height)		

BLADDER & PELVIC FLOOR WITH A LOADING TASK (e.g. ASLR)

RTUS - QUALITATIVE ANALYSIS	TRANSVERSE	SAGITTAL
Caudodorsal motion of bladder with task (Y/N)		
Dorsal motion of bladder with task (Y/N)		
Lateral shift or rotation of bladder with task (direction)		
Observable PFM contraction during task (Y/N)		
Decrease in volume of the bladder (Y/N)		

RTUS - QUANTITATIVE ANALYSIS	TRANSVERSE	SAGITTAL
Caudodorsal distance with task		
Dorsal distance with task		
Angle with respect to image horizontal		
Lateral distance from midline with task		

PREFERENTIAL ACTIVATION OF THE PFM

RTUS QUALITATIVE ANALYSIS	TRANSVERSE	SAGITTAL
Caudal encroachment of bladder with contraction (Y/N)		
Abdominal encroachment of bladder with contraction (Y/N)		
Caudodorsal motion of bladder with contraction (Y/N)		
Cranioventral motion of bladder with contraction (Y/N)		
Decrease in volume of the bladder (Y/N)		
Observable relaxation of the PFM after the contraction (Y/N)		

RTUS QUANTITATIVE ANALYSIS	TRANSVERSE	SAGITTAL
Caudodorsal distance with task		
Cranioventral distance with task		
Angle with respect to image horizontal		

ABDOMINAL WALL RESTING STATE

RTUS - QUALITATIVE ANALYSIS	LEFT	RIGHT
Integrity of the linea alba (quality of architectural delineation)		
Resting respiratory modulation (TrA, IO or both) (Y = > 20%)		
TrA resting state (normal, hypertonic)		
IO resting state (normal, hypertonic)		
Quality of muscle (RA, EO, IO, TrA) tissue (echogenicity < or > 50%)		

RTUS QUANTITATIVE ANALYSIS - RESPIRATION	INSPIRATION		EXPIRATION		% Δ	
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
TA - depth						
IO - depth						

ABDOMINAL WALL WITH A LOADING TASK, (e.g. ASLR)

RTUS - QUALITATIVE ANALYSIS	LEFT	RIGHT
Width of the linea alba (static, ↑ or ↓ in width)		
TrA co-activation throughout task (Y/N)		
Altered TrA co-activation (absent, irregular or excessive)		
IO co-activation throughout task (Y/N)		
Altered IO co-activation (absent, irregular or excessive)		
TrA Relaxation after task (Y/N)		
IO Relaxation after task (Y/N)		

RTUS - QUANTITATIVE ANALYSIS ASLR	RESTING		CONTRACTED		%Δ	
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
TrA - depth						
TrA - length						
IO - depth						

ABDOMINAL WALL WITH PREFERENTIAL ACTIVATION OF TrA

RTUS QUALITATIVE ANALYSIS	LEFT	RIGHT
Effect of TrA on linea alba (static, ↑ or ↓ in width)		
Lateral slide of TrA under IO (Y/N)		
Lateral corset of TrA (Y/N)		
Lateral corset of IO (Y/N)		
↑ TrA girth with attempted isolated recruitment (Y/N)		
↑ IO girth with attempted isolated recruitment (Y/N)		
TrA Relaxation after contraction (Y/N)		
IO Relaxation after contraction (Y/N)		

RTUS QUANTITATIVE ANALYSIS - CONTRACTION	RESTING		CONTRACTED		%Δ	
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
TrA - depth						
TrA - length						
IO - depth						
Midline to linea semilunaris - width						
Linea alba - width						

MULTIFIDUS RESTING STATE

RTUS - QUALITATIVE ANALYSIS	LEFT	RIGHT
Resting shape - level (symmetrical, round, oval or triangular)		
Resting size - level (symmetrical, asymmetrical)		
Quality of muscle tissue (echogenicity - < or > 50%)		

MULTIFIDUS WITH A LOADING TASK (e.g. prone or lateral leg lift)

RTUS - QUALITATIVE ANALYSIS	LEFT	RIGHT
MF co-activation throughout task (Y/N)		
Altered MF co-activation (absent, irregular or excessive)		
MF Relaxation after task (Y/N)		

PREFERENTIAL ACTIVATION OF MULTIFIDUS

RTUS - QUALITATIVE ANALYSIS	LEFT	RIGHT
Observed increase in dMF depth - level (Y/N)		
Observed increase in sMF depth - level (Y/N)		
Anterior motion of spinal column (segmental vs. multi-segmental)		
Speed of contraction (tonic vs. phasic)		
MF Relaxation after task (Y/N)		

RTUS QUANTITATIVE ANALYSIS	Width				Depth				%Δ			
	RESTING		CONTRACTION		RESTING		CONTRACTION		Width		Depth	
	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.
L2												
L3												
L4												
L5												
S1												