Standard Operating Procedure: MRI Quality Control

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The following quality control check has to be performed on all MRI sequences.

1. Check if all 3 MRI sequences (as per SOP MRI acquisition) have been delivered:

   - T2 single shot fast/turbo spin echo Sequence.
   - FISP or FIESTA 3D Spoiled Gradient Echo Sequence or T2 Single shot fast/turbo spin echo without fat saturation.
   - T1-3D Spoiled Gradient Echo Sequence

2. Check the overall image quality in all 3 sequences, most crucial is the image quality for **T1-3D Spoiled Gradient Echo Sequence** that will be used for total kidney volume computation.
3. Check that all 3 sequences have been acquired in coronal orientation.
4. Check and note down the slice thickness. Expected slice thickness is 4mm (as per SOP MRI Acquisition).
5. Check and note down the gap/spacing. Expected gap/spacing is 0mm (as per SOP MRI acquisition). If the spacing does not conform SOP, then remove appropriate number of slices, to get closest possible to 0 mm spacing. These new reduced slices should also be used for the purpose of volume computation. The new slice thickness will be the new pixel distance between adjacent reduced slices, to be used for the final total kidney volume computation.
6. Check the sequences for completeness of kidney acquisition including detached cysts that might appear separate from the kidney in some cases.
7. Check for completeness of liver acquisition. Make sure that liver and kidneys are visible entirely and not cut in the field of view.

For inquiries regarding these guidelines, please contact: Andreas Serra, info@adpkd.ch