

Case Study – Improving Acceleration

Right renal artery imaging



Challenge



For pediatric patients, imaging the body while injecting contrast is usually challenging. Imaging small children with enough detail to see small structures takes time. But scanning for a long time means we don't get to see how the contrast looks as it is going into the patient. Radiologists use this dynamic contrast enhancement as standard of care in adults, but it is much harder to do in children due to the extra time needed to image small structures.

Solution



The small coil elements and light weight allow for maximal detection of signal coming from the body, which means less time is needed to create high quality images.

The arrangement of the coils can also be used to further speed up exams, using a common MRI technique called acceleration. PI is dependent on the coil arrangement matching the body in a specific way. The PBA24 coil is specifically has an arrangement that is ideal for small children.

Result



Small coil elements close to the body allow capture a lot of signal, allowing us to see small structures like the right renal artery (arrow) in this pediatric patient.

Since the InkSpace Imaging coil is well-matched to children, imaging can be accelerated enough that we can see the entire contrast dynamics: the arteries fill first, then the organs, then the veins.