

Optimal IQ with vHP 3 phase for Tumor staging

"vHP3 streamlines CT imaging by providing optimal image quality for the variable body regions, with the acquisition and reporting workflow advantages of a single, fast helical scan."

Dr. Mark Kon

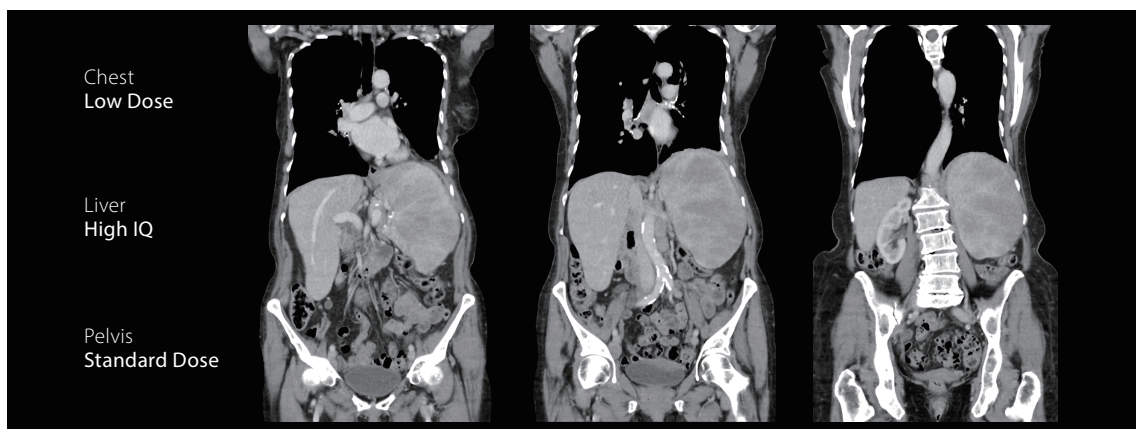
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Patient History

This 73-year-old woman presented with a cough and 10 kg weight loss. She had a history of resection of the left kidney in 2009 for renal cell carcinoma. An initial chest X-ray suggested consolidation at the base of the left lung and a CT was requested to investigate for further malignancy. A three phase variable Helical Parameters (vHP3)*¹ protocol of the chest, abdomen and pelvis was performed at the portal venous phase (70 second delay after injection) at three adaptive exposure settings.

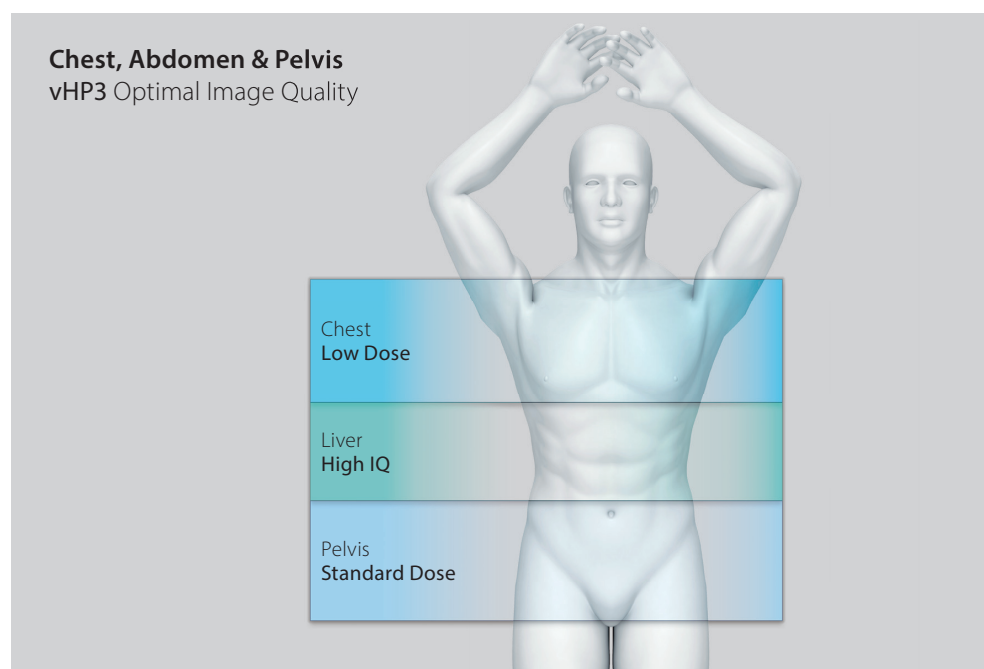
Results



A large mass is seen in the left upper quadrant of the abdomen. Initially thought to be a locally recurrent renal carcinoma, further investigation revealed that the mass represented a massively enlarged spleen over 18 cm in cranio-caudal length. At the time of publication, the working diagnosis was lymphoma, which will be confirmed with an ultrasound guided biopsy of the left supraclavicular lymph node.

Technology

vHP3 provides full flexibility to adapt scan parameters within one helical acquisition. For each body region a separate image quality reference level can be set within the automatic exposure control. vHP3 provides the freedom to prescribe your desired image quality level and radiation exposure dose for each body region and clinical task at hand.



Conclusion

vHP3 provides the flexibility of performing three separate scans into one seamless acquisition to potentially save radiation dose, contrast dose, or both.

The single series reconstruction provides a fast way to review the entire examination and potentially reduce reading times.

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Clinical results may vary due to clinical setting, patient presentation and other factors.

Acquisition

Scanner Model:	Aquilion Prime SP
Scan Mode:	vHP ^{*2}
Collimation:	0.5 mm x 80
Exposure:	100 kV ^{SURE} Exposure 1) Low Dose 2) High IQ 3) Standard Dose
Rotation Time:	0.5 second
Dose Reduction:	AIDR ^{*3} 3D Enhanced
CTDI:	4.8 mGy
DLP:	311.5 mGy-cm
Effective Dose:	4.52 mSv
k-factor:	0.0145 ^{*4}

^{*1} Option

^{*2} Variable Helical Pitch

^{*3} Adaptive Iterative Dose Reduction

^{*4} American Association of Physicists in
Medicine (AAPM) Report 96, 2008.

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