

## Case 5

# Identification of a Non-Hodgkin Lymphoma Recurrence Using the SOMATOM Definition AS+ for Evaluation in Oncology Routine

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### HISTORY

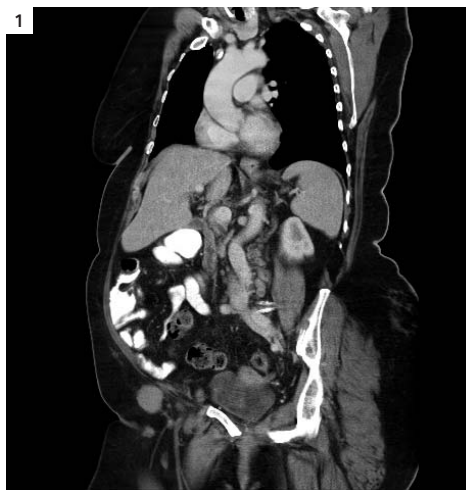
A 75-year-old female patient presented during the oncology consultation hour because of a lump in the groin. She was referred to CT division to undergo MDCT in suspicion of recurrent lymphoma.

### DIAGNOSIS

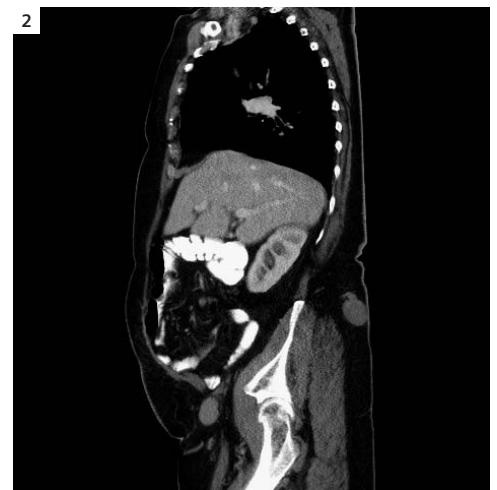
The evaluation showed enlarged retroperitoneal, iliacal and inguinal lymph nodes. A large subcutaneous nodule (3,9 x 2,8 cm) could be revealed on the right side of the back. Comparisons with prior exams suggested recurrence of Non-Hodgkin Lymphoma.

### COMMENTS

Reassessment of the overall tumor mass is an important issue in therapy monitoring and the follow-up of patients during and after chemotherapy. RECIST and WHO criteria have been created to standardize and objectify response to cytotoxic agents. These criteria rely on uni- or bidirectional measurements. Automated three-dimensional (volumetric) measurement tools, as implemented in the new *syngo* CT Oncology application, can help to give a more precise estimate of tumor response and improve the radiologists workflow by selecting just the target lesion.



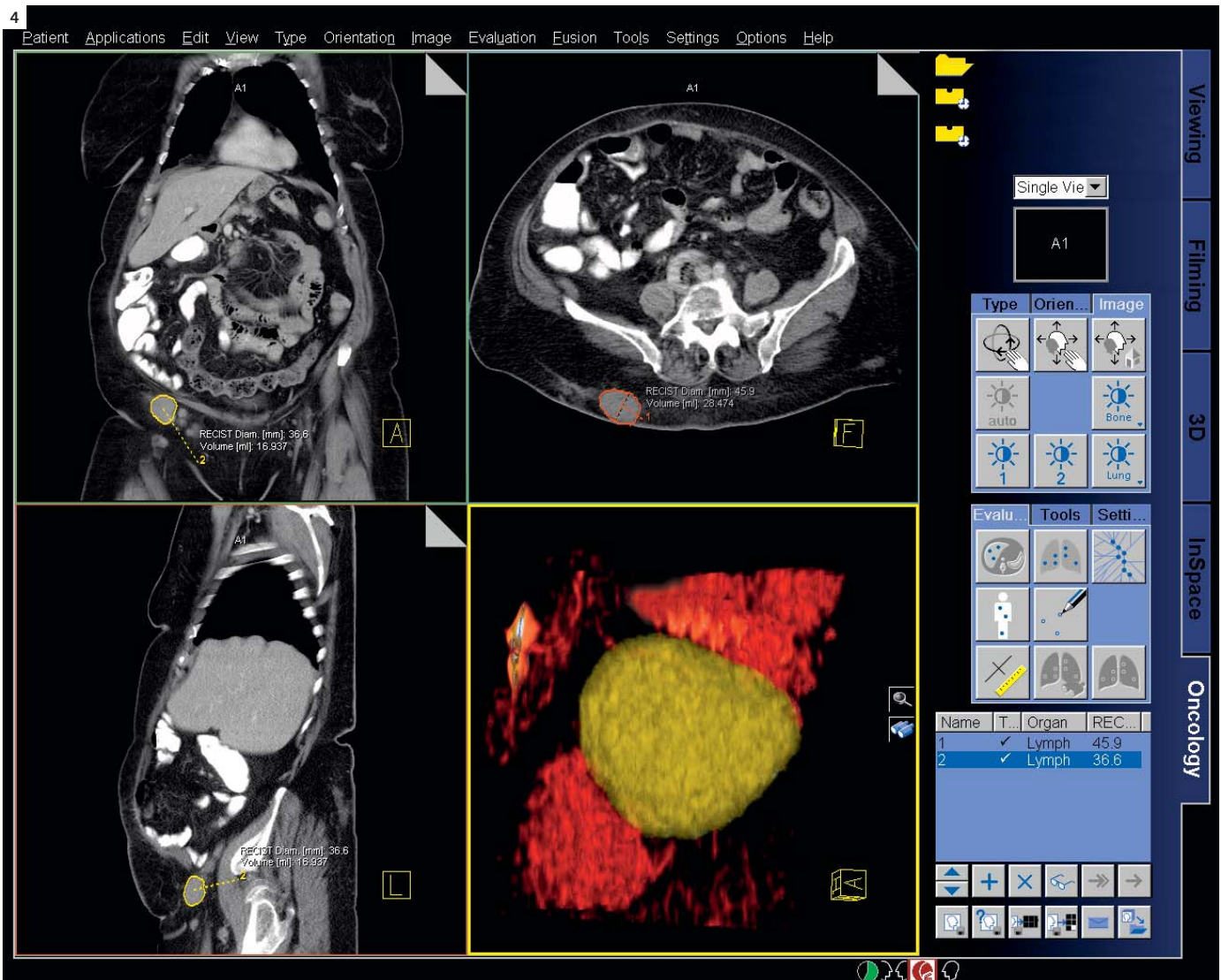
**1** Enlarged retroperitoneal lymph nodes and lump in the right groin.



**2** Sagittal MPR showing masses in the groin and subcutaneous fat cranial to the gluteus muscle.



**3** Excellent image quality despite large body habitus, shown with the new SOMATOM Definition AS+ (Figs. 3A and 3B).



4 Volumetric assessment of tumor burden.

## EXAMINATION PROTOCOL

<b>Scanner</b>	SOMATOM Definition AS+		
<b>Scan length</b>	660 mm	<b>Pitch</b>	0.7
<b>Scan time</b>	12 s	<b>Reconstruction increment</b>	0.5 mm
<b>Scan direction</b>	head to feed	<b>CTDI<sub>vol</sub></b>	18.33 mGy
<b>Tube voltage</b>	120 kV	<b>Reconstruction kernel</b>	B31f
<b>Tube current</b>	270 quality ref. mAs	<b>Contrast</b>	
<b>Rotation time</b>	0.5 s	<b>Volume</b>	75 ml CM / 50 ml NaCl
<b>Spatial resolution</b>	0.33 mm	<b>Flow rate</b>	3 ml/s
<b>Slice collimation</b>	128 x 0.6 mm	<b>Start delay</b>	CARE Bolus
<b>Slice width</b>	0.75 mm	<b>Postprocessing</b>	syngo CT Oncology