



C6

CT lung cancer diagnostics

## Veolity LungCAD

AI-aided detection of  
lung nodules



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### Veolity LungCAD

Veolity LungCAD<sup>1</sup> provides fully integrated AI-enabled detection support for pulmonary nodules for chest CT scans in lung cancer diagnostics.

### Overview

Multi-slice computed tomography (MSCT) is state of the art in three-dimensional medical x-ray imaging. Thanks to its better detail resolution, it now plays an important role in modern lung diagnostics. Within a few seconds, details of the entire lung are imaged in three dimensions. However, evaluating the growing volumes of data is increasingly challenging. MeVis' Veolity LungCAD assists radiologists in the detection of pulmonary nodules highlighting regions of interest that may have been initially overlooked.

In lung cancer diagnostics, Veolity LungCAD improves diagnostic quality. Complex follow-up comparisons are easy and efficient. Valuable automatic segmentation with volumetric quantification of lung nodules helps radiologists to generate reproducible and comparable results that easily integrate into existing IT infrastructure and reading workflow. Radiologists benefit from automatic CAD results while retaining complete control of their diagnostic process.

Veolity LungCAD is used worldwide assisted by an experienced project management team with comprehensive support.<sup>2</sup>

### Benefits

- Improves diagnostic quality
- Contributes important image information without extra efforts
- Facilitates temporal nodule comparison/management
- Integrates into clinical network infrastructure, vendor neutral
- Does not require additional software installations

### Features

- Computer-aided detection (CAD) for solid, part-solid, non-solid, and calcified pulmonary nodules
- Automatic follow-up comparison
- Automatic nodule segmentation
- Automatic volume measurement of lung nodules including key images

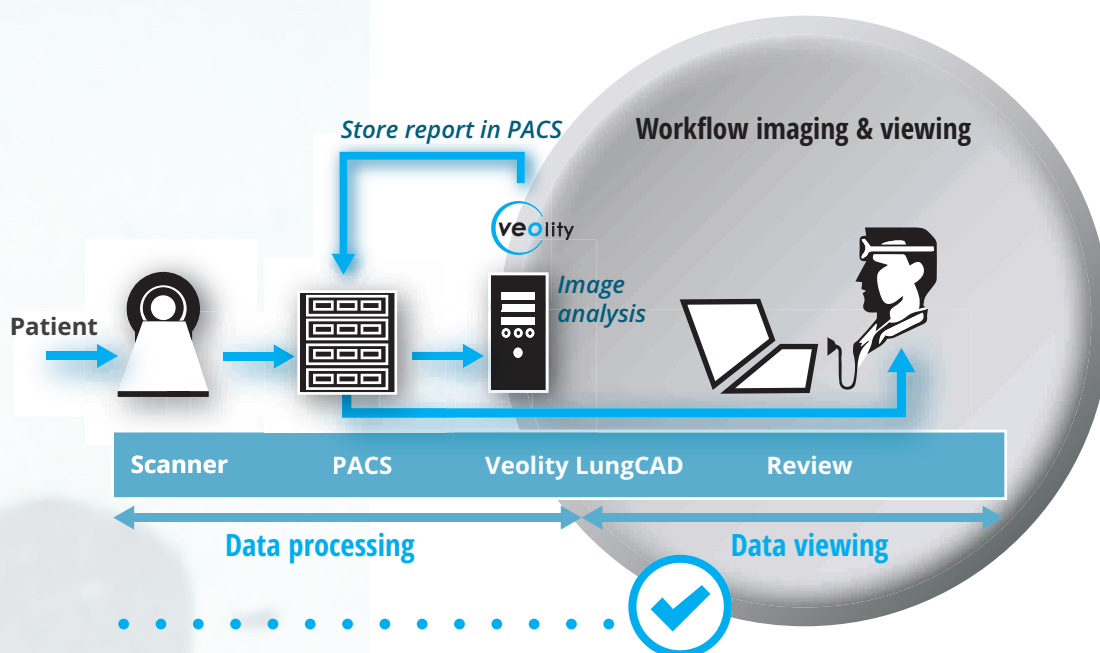
<sup>1</sup> Veolity LungCAD is a licensable component of Veolity.

<sup>2</sup> This product might not be available in all countries.

MeVis significantly contributes to the early detection and diagnostics of cancer, thus facilitating an early and tailor-made treatment of the disease. In order to meet this challenge, MeVis develops innovative software for the analysis and processing of image data which is marketed to manufacturers of medical devices and IT-platforms.



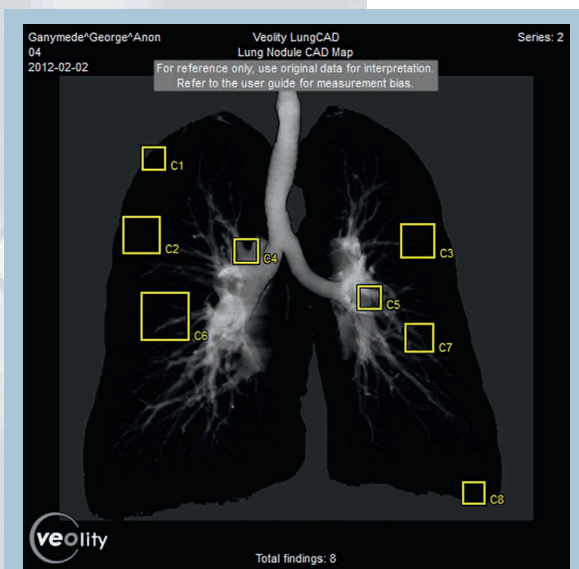
## Veolity LungCAD – with automated image analysis workflow



It is so easy

... as chest CT analysis runs automatically  
including delivery of quantified nodule candidates directly into your PACS.

## Examples



*Overview map for lung nodules  
with CAD marks*

Ganymede\*George\*Anon  
04  
2012-02-02

Veolity LungCAD  
Lung Nodule CAD Result Table

Series: 2

For reference only, use original data for interpretation.  
Refer to the user guide for measurement bias.

ID	Nodule Type	Volume (mm <sup>3</sup> )	Avg. Diam. (mm)	Long Axis (mm)	Short Axis (mm)	Mean Density (HU)	Frame #	Z pos (mm)
C1	Solid	21	3.9	5.6	2.2	-238	447	-79.3
C2	Solid	672	11.8	15.5	8.1	-140	367	-135.3
C3	Solid	284	8.9	13.3	4.5	-93	360	-140.2
C4	Solid	133	5.7	6.3	5.0	-232	350	-147.2
C5	Solid	23	4.0	5.7	2.2	-265	301	-181.5
C6	Part-solid	4998 / 251	21.3 / 7.0	24.1 / 9.7	18.4 / 4.2	-578 / -158	281	-195.5
C7	Non-solid	276	8.9	9.9	7.9	-596	258	-211.6
C8	Calcified	29	3.6	4.4	2.8	+277	95	-325.7

veolity

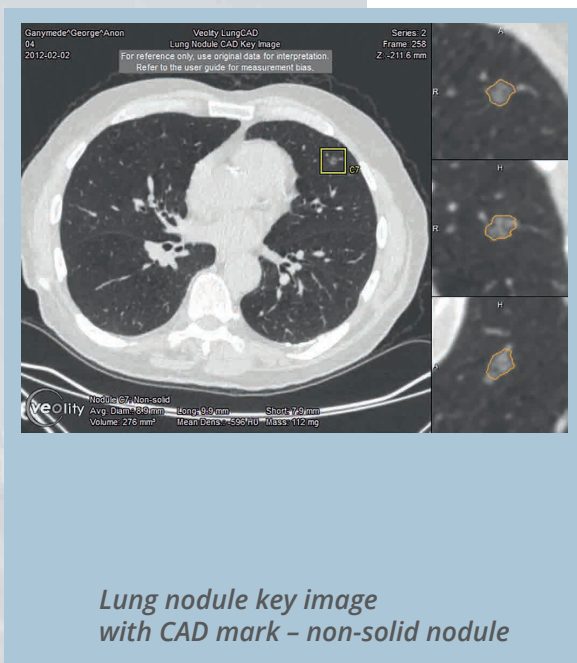
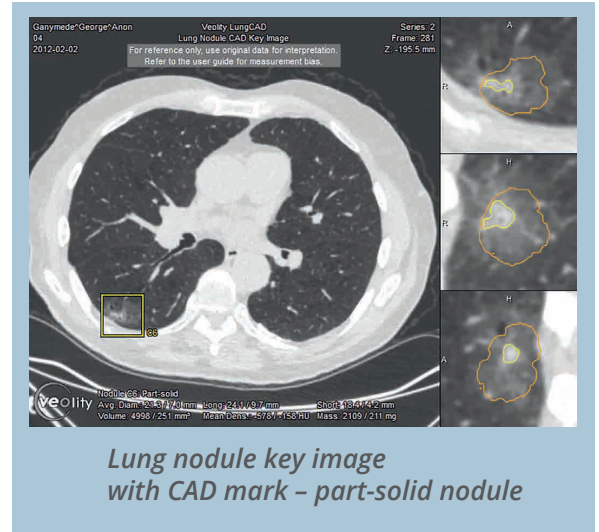
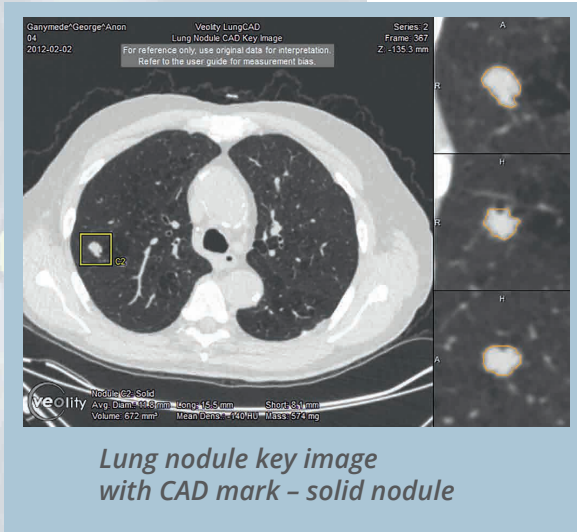
Total findings: 8

Page 1 of 1

*Finding report for lung nodules with  
segmentation results*

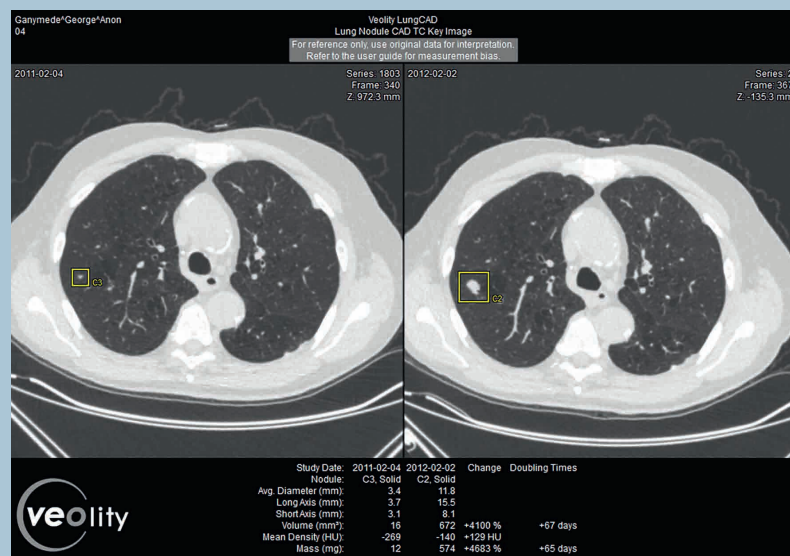


## Examples

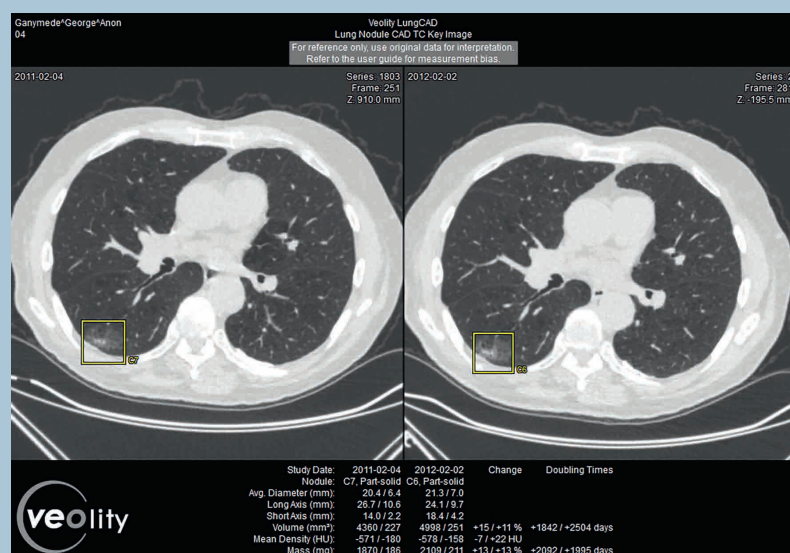


## Examples – temporal comparison

C4



*Lung nodule temporal comparison key image  
with CAD mark – solid nodule*

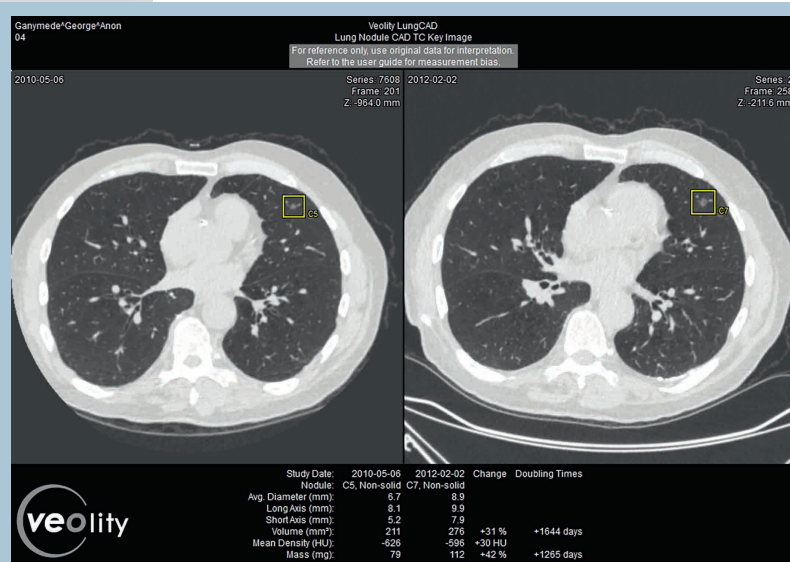


*Lung nodule temporal comparison key image  
with CAD mark – part-solid nodule*





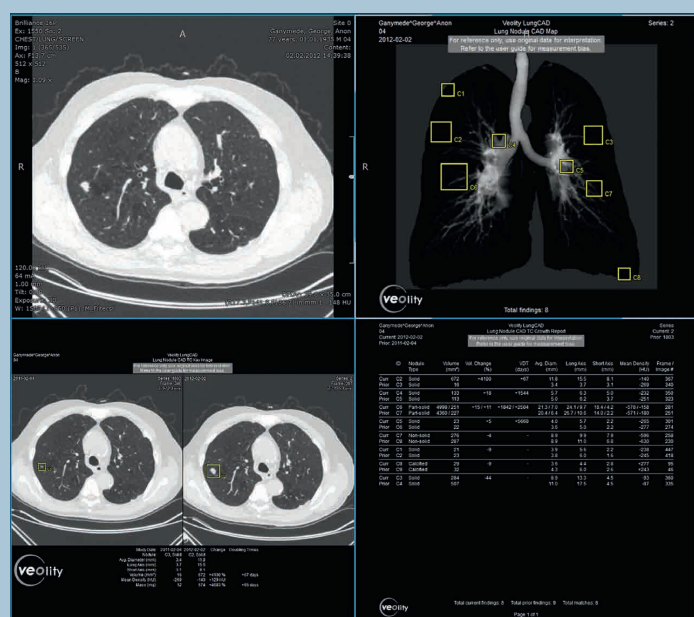
## Examples – temporal comparison



*Lung nodule temporal comparison key image  
with CAD mark – non-solid nodule*

## Examples – temporal comparison

C4



*LungCAD results integrated in PACS  
as part of original study*

Garrymeyer*George*Anon									
Lung Nodule CAD TO Growth Report									
For reference only, use original data for interpretation									
Refer to the user guide for measurement data									
ID	Nodule Type	Volume (mm³)	Vol. Change (%)	VDI (days)	Avg Diam (mm)	Long Axis (mm)	Short Axis (mm)	Mean Density (HU)	Frame / Image #
Cur C2	Solid	572	+4100	+57	11.8	15.5	8.1	-145	327
Prior C2	Solid	16			3.4	3.7	3.1	-269	340
Cur C4	Solid	133	+18	+1544	5.7	6.3	5.0	-232	350
Prior C4	Solid	113			6.2	6.2	3.7	-251	323
Cur C5	Part solid	4988 / 251	+15 / +11	+1842 / +2504	21.3 / 7.0	24.1 / 9.7	18.4 / 4.2	-578 / -158	281
Prior C5	Part solid	4350 / 227			20.4 / 6.4	25.7 / 10.5	14.0 / 2.2	-571 / -150	251
Cur C6	Solid	23	+5	+5660	4.0	5.7	2.2	-265	301
Prior C6	Solid	22			3.6	5.0	2.2	-277	274
Cur C7	Non-solid	276	-4	-	8.9	9.9	7.9	-595	258
Prior C7	Non-solid	287			8.8	11.0	8.8	-630	230
Cur C8	Solid	21	-9	-	3.9	5.5	2.2	-228	447
Prior C8	Solid	23			3.8	6.0	1.6	-245	418
Cur C9	Calcified	29	-9	-	3.6	4.4	2.8	+277	95
Prior C9	Calcified	32			4.3	6.0	2.6	+243	45
Cur C3	Solid	284	-44	-	8.9	13.3	4.5	-93	350
Prior C3	Solid	507			11.0	17.5	4.5	-87	335

*Lung nodule temporal comparison  
finding report*