LIFEx v7.4.0

Announcement

— LIFEx —

C. Nioche, F. Orlhac, I. Buvat

institut Curie

LITO Laboratoire d'Imagerie Translationnelle en Oncologie

cea

Inserm La science pour la santé From science to health

sfpm

cnrs

UNIVERSITÉ PARIS SUD

université PARIS-SACLAY

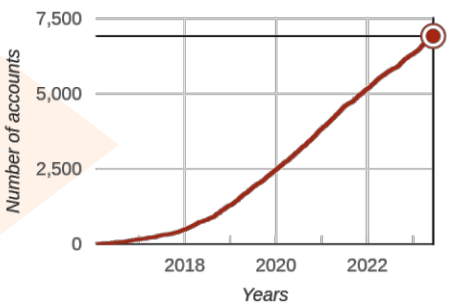
What is new?

LIFEx version 7.4.0
Last update of document: 2023/06/26

LIFEx v7.4.0
Annoucement
— LIFEx —

Acknowledgements

Dear LIFEx users,

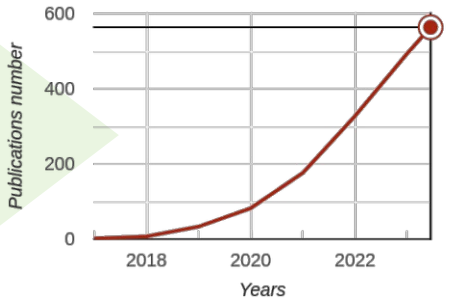


Evolution of the number of accounts (from our site web)

We are pleased to announce the release of LIFEx v7.4.0

We would like to take this opportunity to thank all 7.000 LIFEx users for their feedback and relevant suggestions. We took into account your comments to enhance the software and produce this version.
We hope you will enjoy it.

Do not hesitate to download this new release and replace your old LIFEx version. Your feedback will always be welcome.



Evolution of Publications referencing LIFEx (from PubMed)

LIFEx is free of charge.

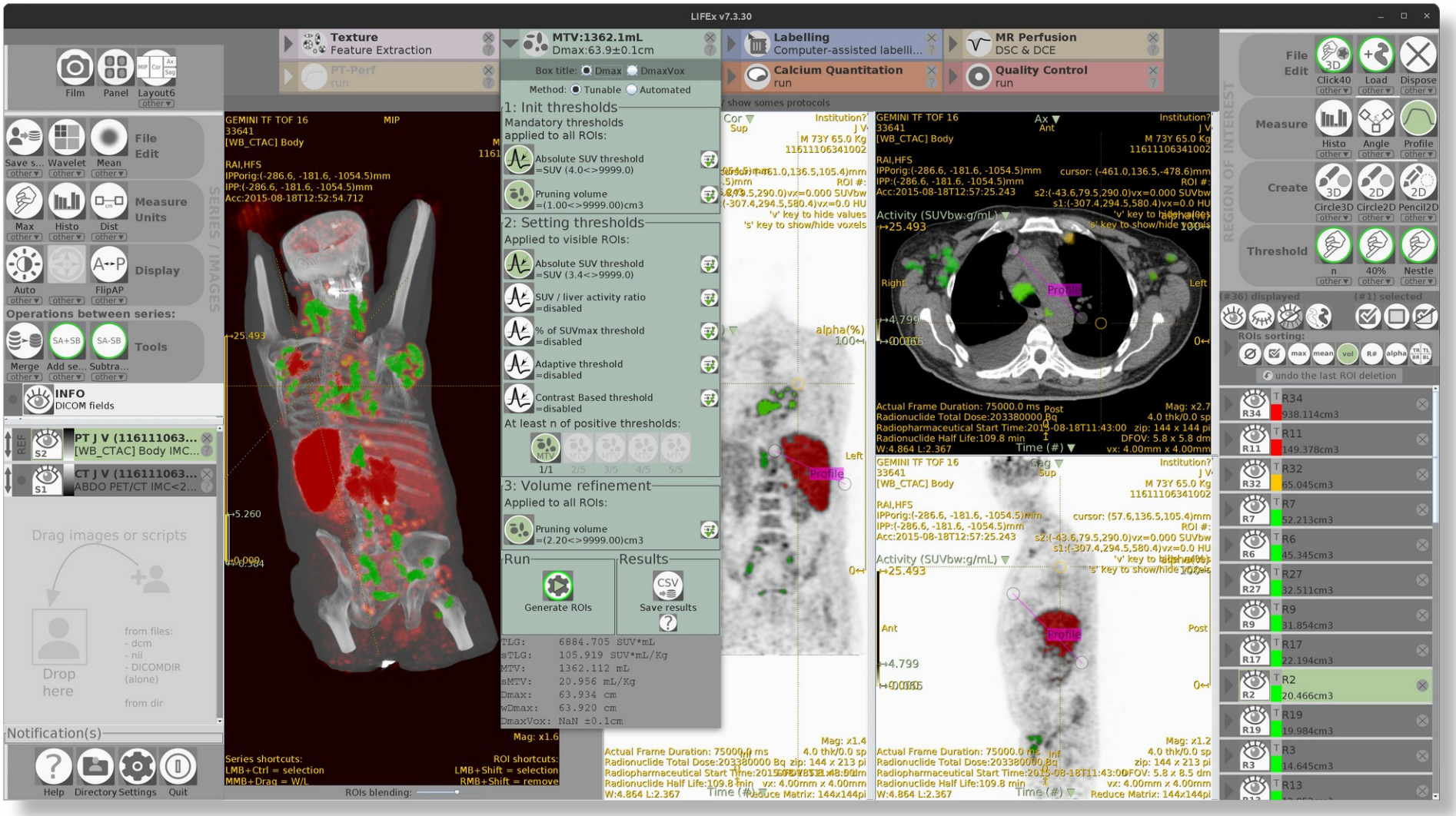
Please help us to keep it free by always quoting the LIFEx reference: (see below)

Please note that the correct reference to be cited is:
C Nioche, F Orlhac, S Boughdad, S Reuzé, J Goya-Outi, C Robert, C Pellot-Barakat, M Soussan, F Frouin, and I Buvat. LIFEx: a freeware for radiomic feature calculation in multimodality imaging to accelerate advances in the characterization of tumor heterogeneity. Cancer Research 2018; 78(16):4786-4789

LIFEx v7.4.0
Annoucement
— LIFEx —

Interface screenshot

Christophe Nioche

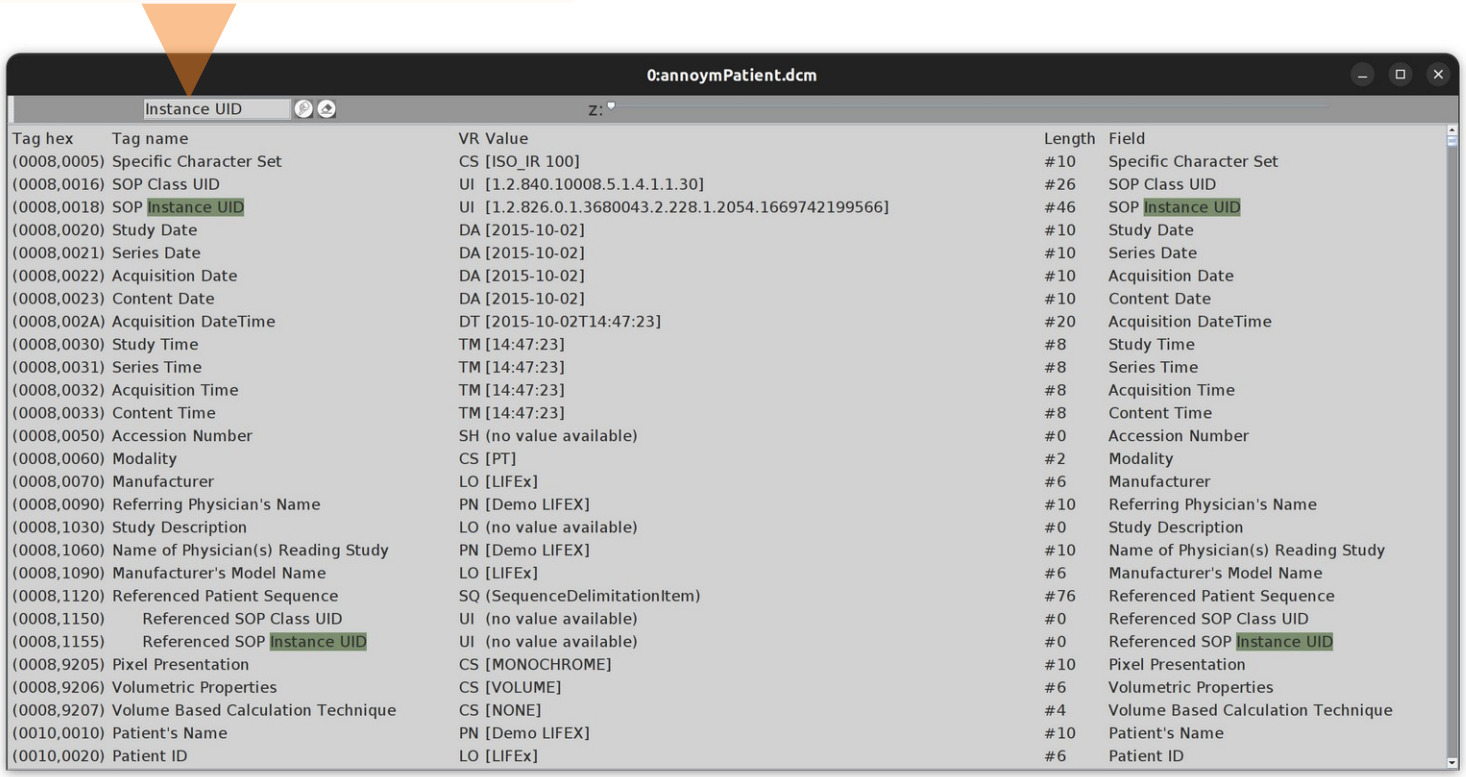


LIFEx v7.4.0
Annoucement
— LIFEx —

Interface screenshot

Christophe Nioche

Main:
- added: search field in DICOM viewer
- fixed: (group, item) of DICOM tag in DICOM viewer

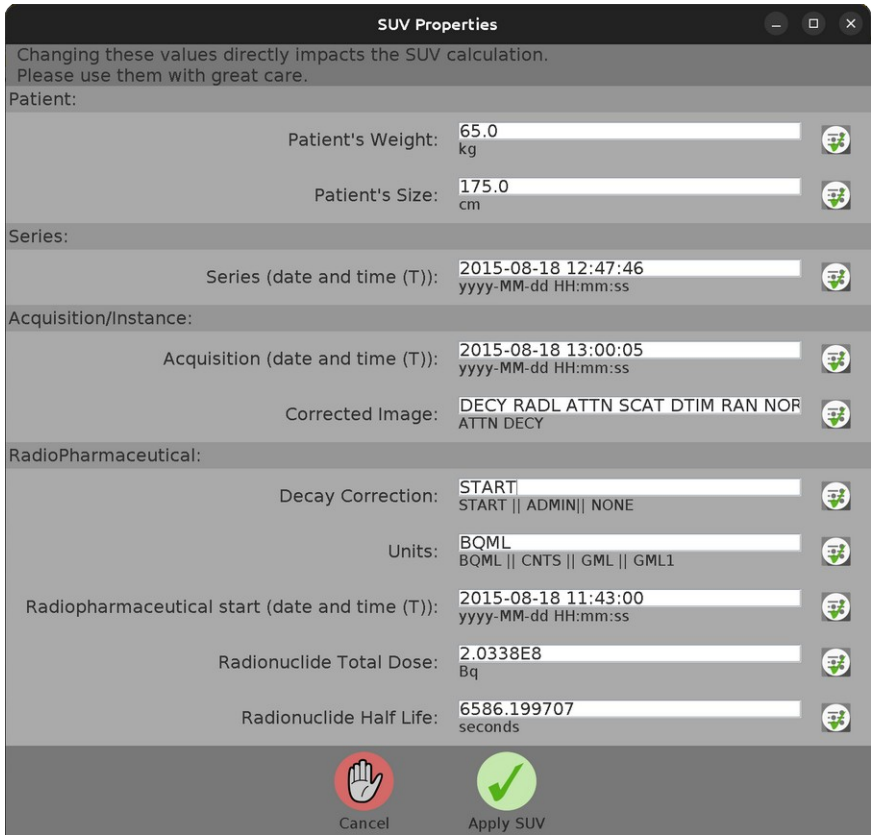


Tag hex	Tag name	VR	Value	Length	Field
(0008,0005)	Specific Character Set	CS	[ISO_IR 100]	#10	Specific Character Set
(0008,0016)	SOP Class UID	UI	[1.2.840.10008.5.1.4.1.1.30]	#26	SOP Class UID
(0008,0018)	SOP Instance UID	UI	[1.2.826.0.1.3680043.2.228.1.2054.1669742199566]	#46	SOP Instance UID
(0008,0020)	Study Date	DA	[2015-10-02]	#10	Study Date
(0008,0021)	Series Date	DA	[2015-10-02]	#10	Series Date
(0008,0022)	Acquisition Date	DA	[2015-10-02]	#10	Acquisition Date
(0008,0023)	Content Date	DA	[2015-10-02]	#10	Content Date
(0008,002A)	Acquisition DateTime	DT	[2015-10-02T14:47:23]	#20	Acquisition DateTime
(0008,0030)	Study Time	TM	[14:47:23]	#8	Study Time
(0008,0031)	Series Time	TM	[14:47:23]	#8	Series Time
(0008,0032)	Acquisition Time	TM	[14:47:23]	#8	Acquisition Time
(0008,0033)	Content Time	TM	[14:47:23]	#8	Content Time
(0008,0050)	Accession Number	SH	(no value available)	#0	Accession Number
(0008,0060)	Modality	CS	[PT]	#2	Modality
(0008,0070)	Manufacturer	LO	[LIFEx]	#6	Manufacturer
(0008,0090)	Referring Physician's Name	PN	[Demo LIFEX]	#10	Referring Physician's Name
(0008,1030)	Study Description	LO	(no value available)	#0	Study Description
(0008,1060)	Name of Physician(s) Reading Study	PN	[Demo LIFEX]	#10	Name of Physician(s) Reading Study
(0008,1090)	Manufacturer's Model Name	LO	[LIFEx]	#6	Manufacturer's Model Name
(0008,1120)	Referenced Patient Sequence	SQ	(SequenceDelimitationItem)	#76	Referenced Patient Sequence
(0008,1150)	Referenced SOP Class UID	UI	(no value available)	#0	Referenced SOP Class UID
(0008,1155)	Referenced SOP Instance UID	UI	(no value available)	#0	Referenced SOP Instance UID
(0008,9205)	Pixel Presentation	CS	[MONOCHROME]	#10	Pixel Presentation
(0008,9206)	Volumetric Properties	CS	[VOLUME]	#6	Volumetric Properties
(0008,9207)	Volume Based Calculation Technique	CS	[NONE]	#4	Volume Based Calculation Technique
(0010,0010)	Patient's Name	PN	[Demo LIFEX]	#10	Patient's Name
(0010,0020)	Patient ID	LO	[LIFEx]	#6	Patient ID

LIFEx v7.4.0
Annoucement
— LIFEx —

SUV editor

Christophe Nioche



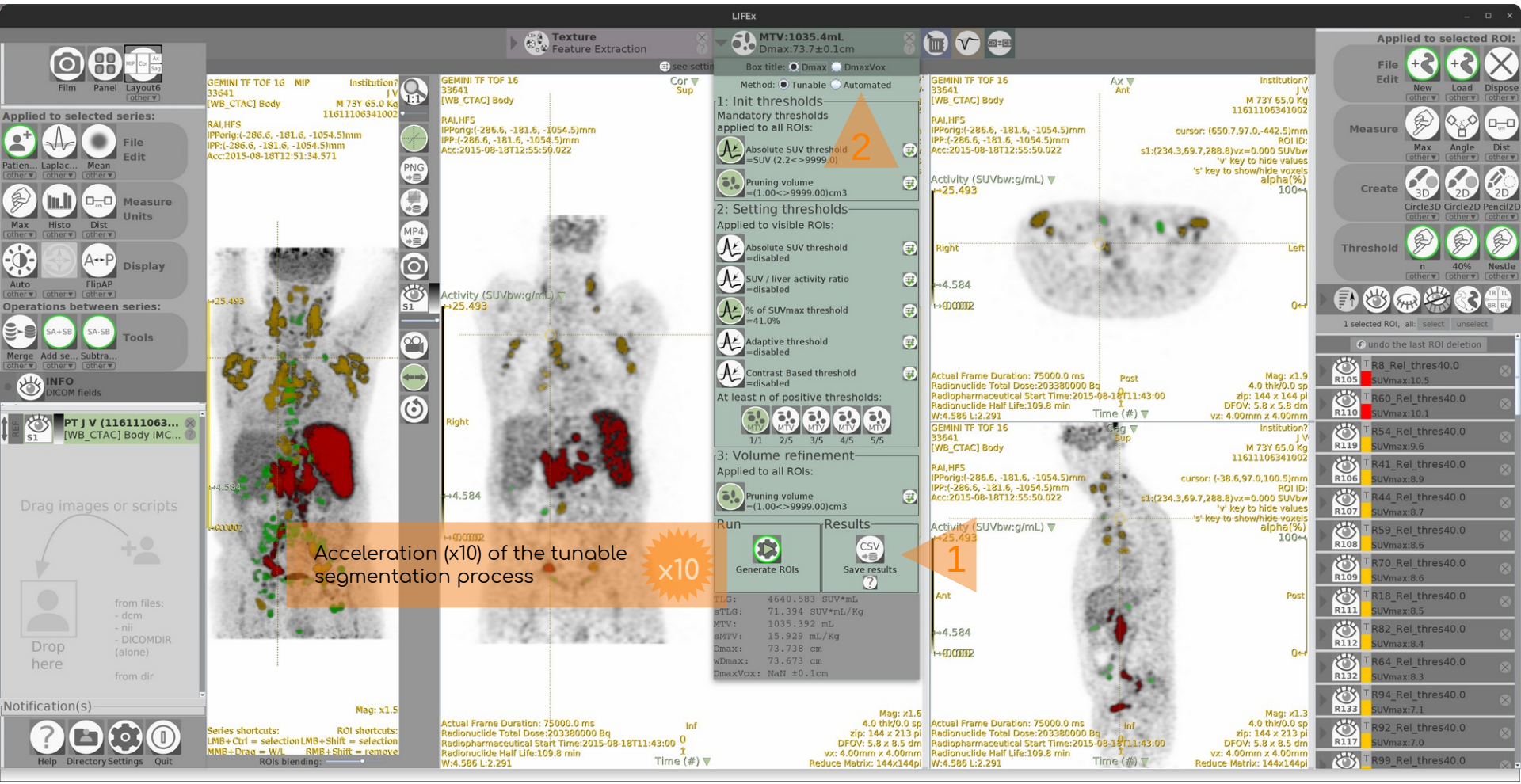
LIFEx v7.4.0
Annoucement
— LIFEx —

MTV updates

Christophe Nioche

1 The MTV results have become independent of the generation of ROIs
→ i.e. they can therefore now be saved with already existing ROIs

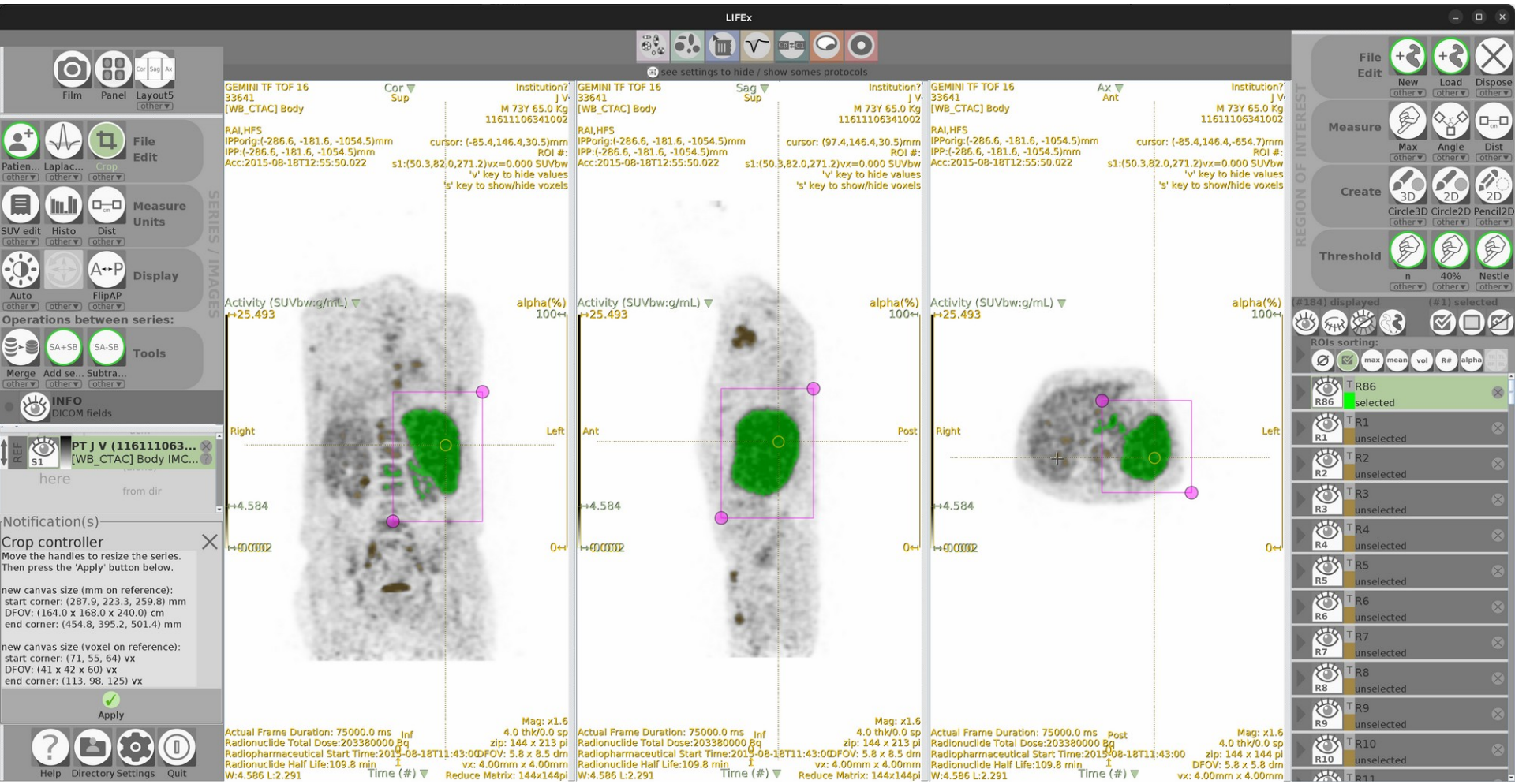
2 New automated method (without input parameters) to generate ROIs



LIFEx v7.4.0
Annoucement
— LIFEx —

Crop series (...)

Christophe Nioche



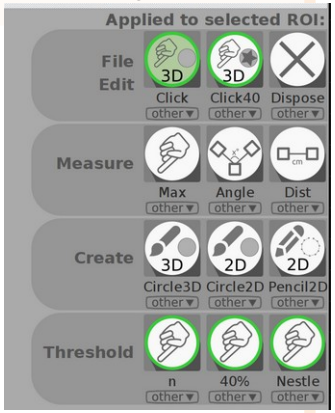
LIFEx v7.4.0
Annoucement
— LIFEx —

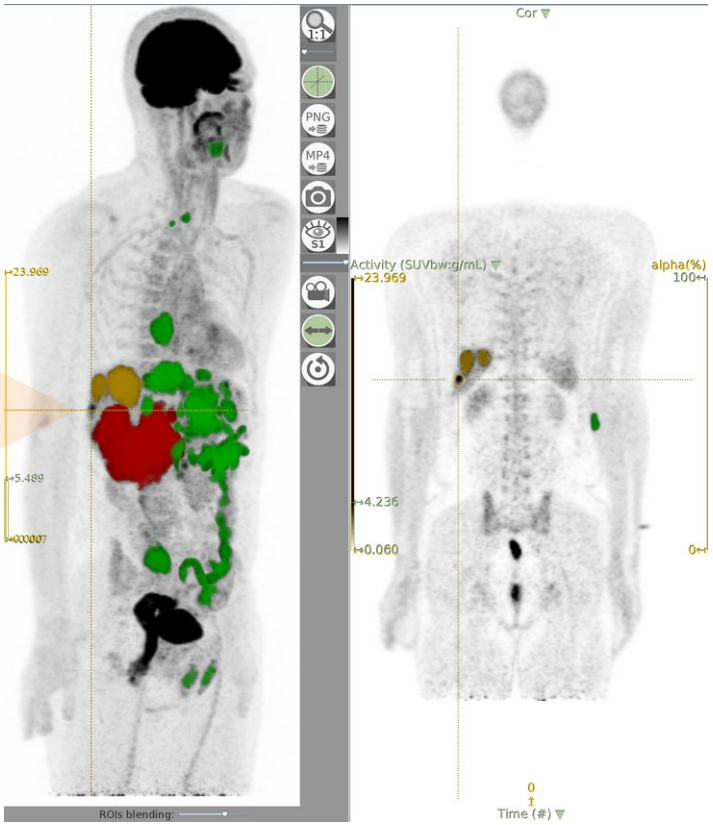
MTV updates

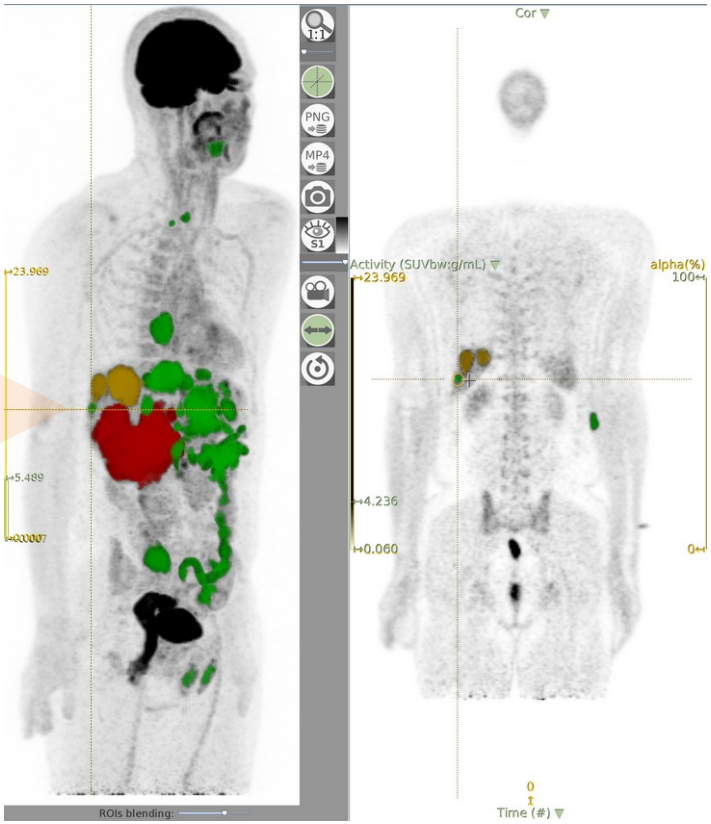
Christophe Nioche

MIP updates

- improved: Ctrl-LMB on MIP locates crosshair on planar view
- improved: Shift-LMB on MIP selects ROI on planar view and in ROI interface
- improved: added "Click" and "Click40" tools directly on MIP frame with Shift+LMB



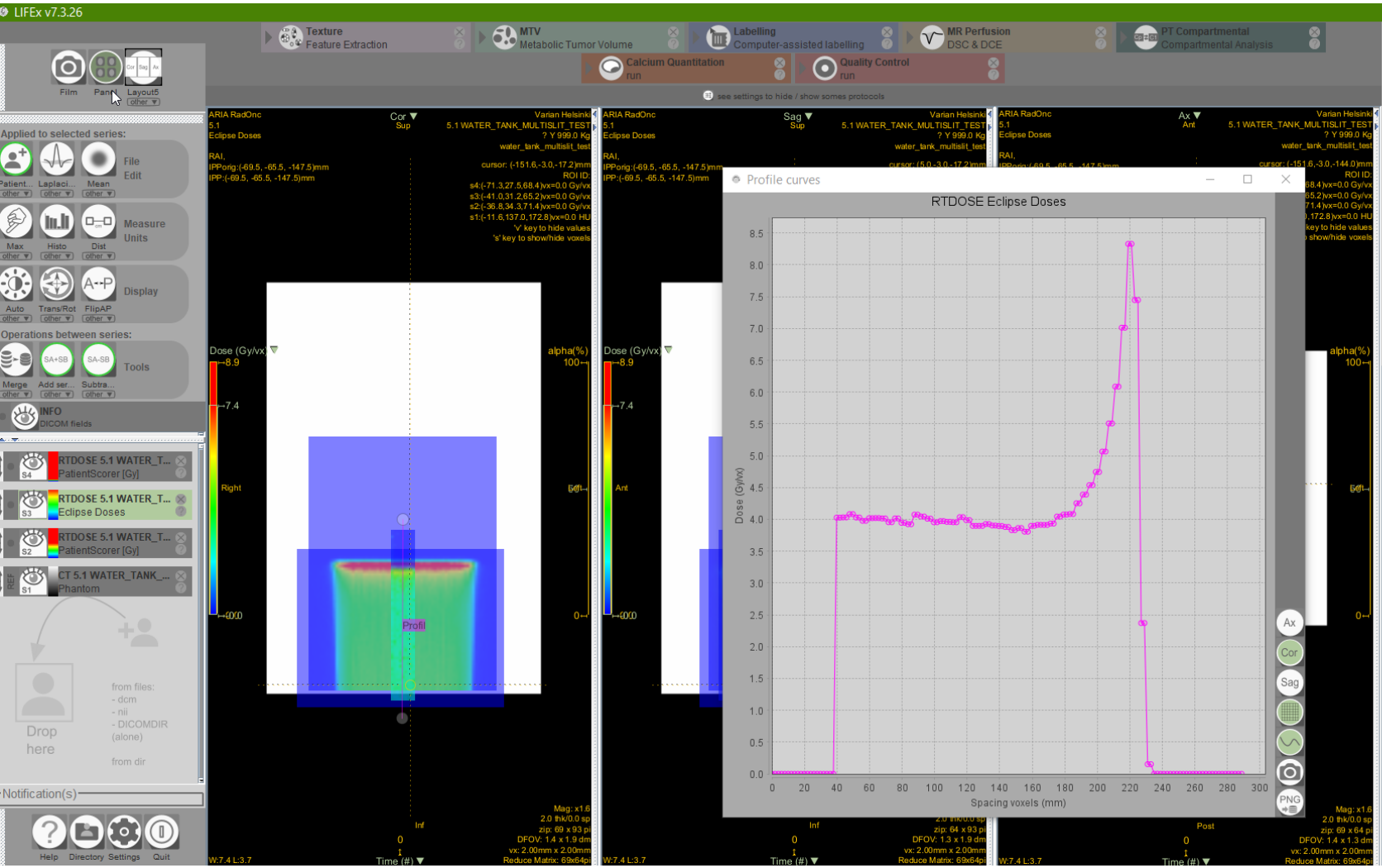




LIFEx v7.4.0
Annoucement
— LIFEx —

New: Profile

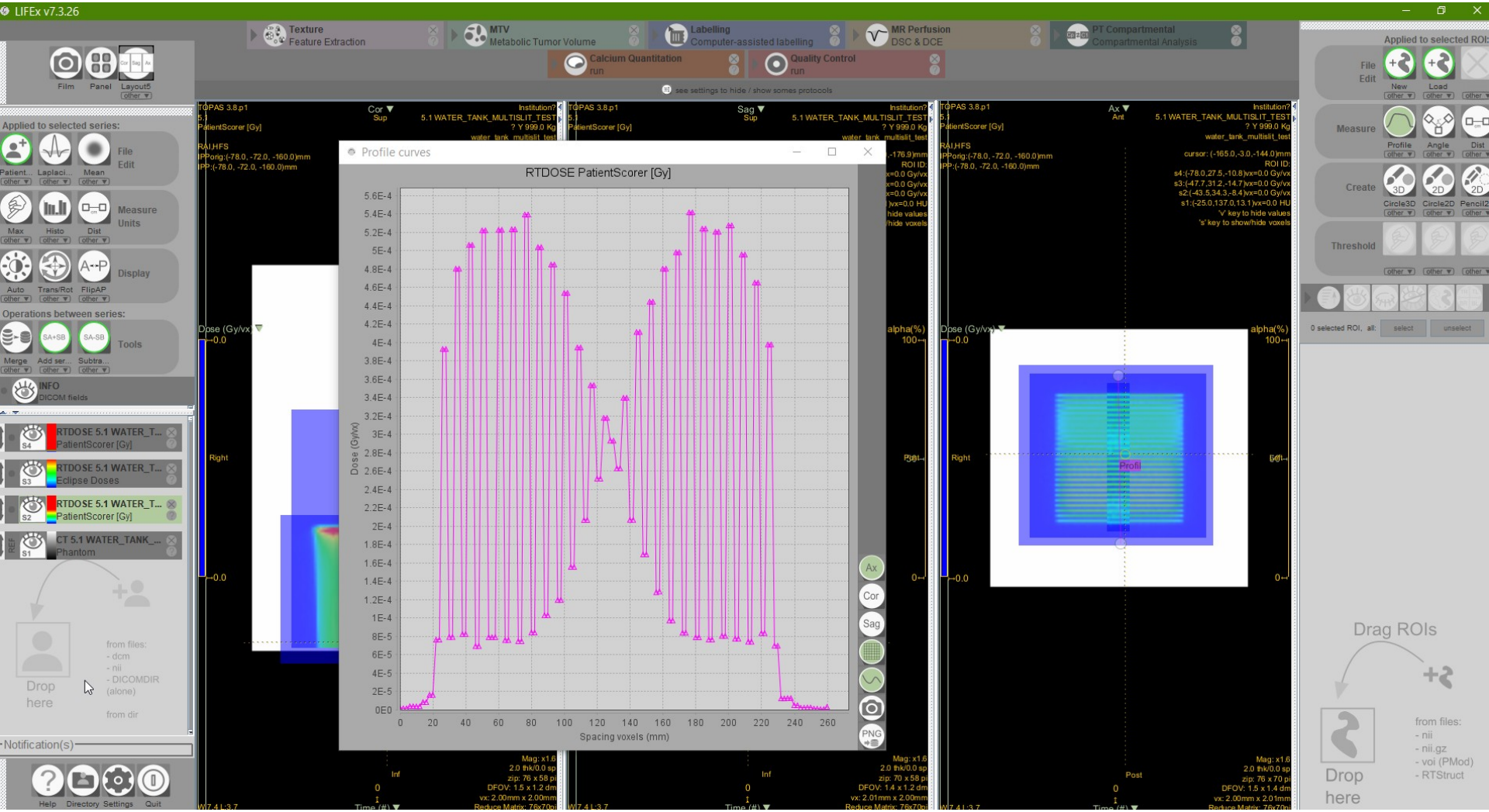
Anthony Bonfrate



LIFEx v7.4.0
Annoucement
— LIFEx —

New: Profile

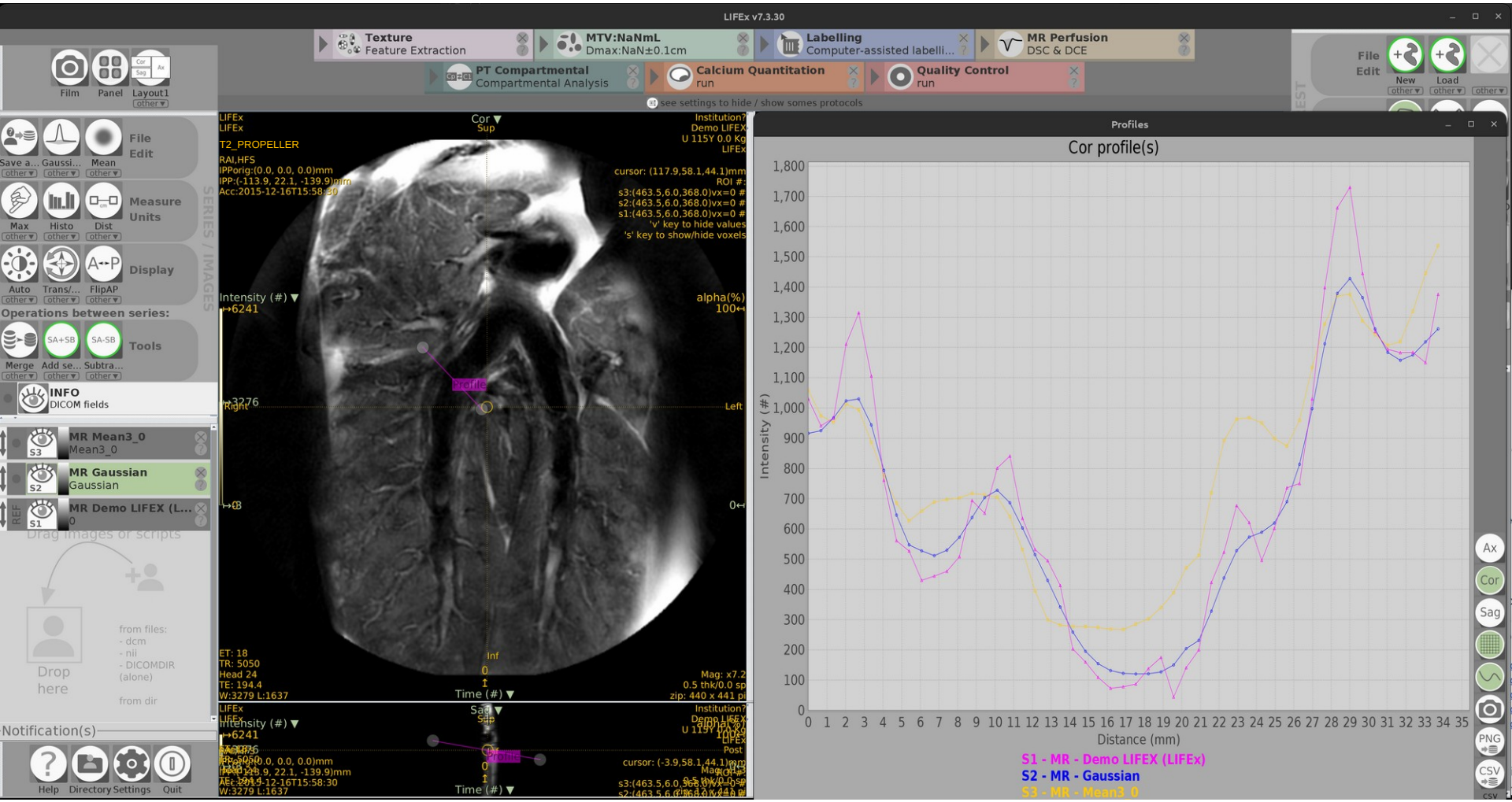
Anthony Bonfrate



LIFEx v7.4.0
Annoucement
— LIFEx —

New: Profile

Christophe Nioche

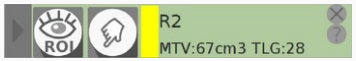


LIFEx v7.4.0
Annoucement
— LIFEx —

ROI updates

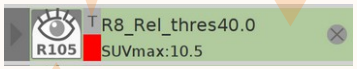
C. Nioche

ROI:
Old display options (v7.3.0)



ROI:
New display options (v7.4.0)

double-clicks:
Localize max value



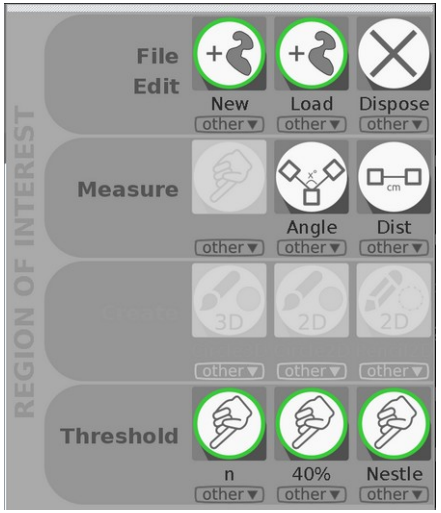
Display ID on icon
On/Off display

Quick editing
with predefined organ names

LIFEx v7.4.0
Annoucement
— LIFEx —

ROI multi-selection

C. Nioche



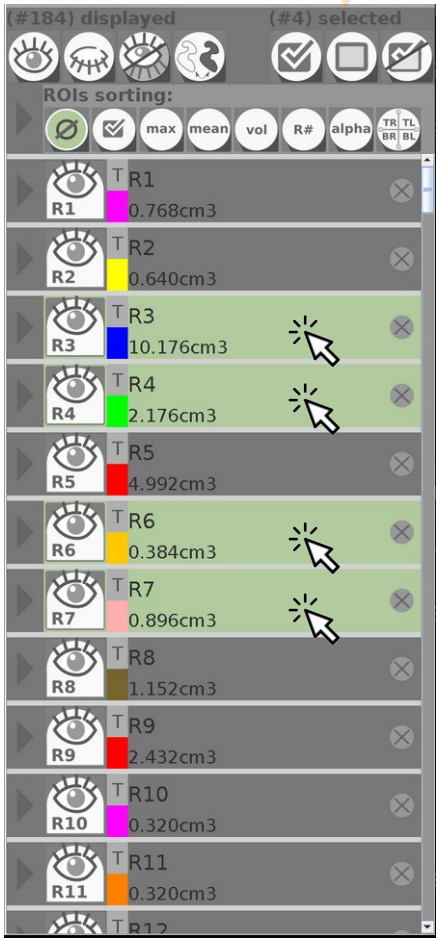
new display
tool bar

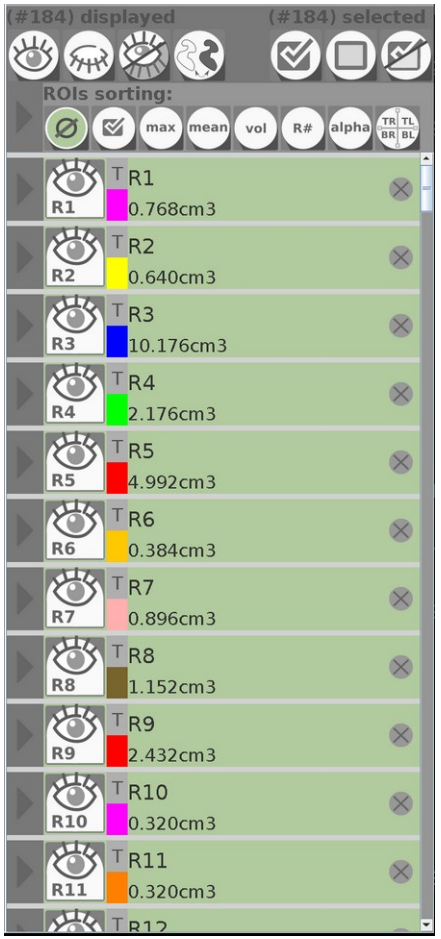
new buttons for :
show/hide all

new sorting bar

have a multi selection
to make grouped action
one click : select
another click: deselect

new buttons for :
un/select all





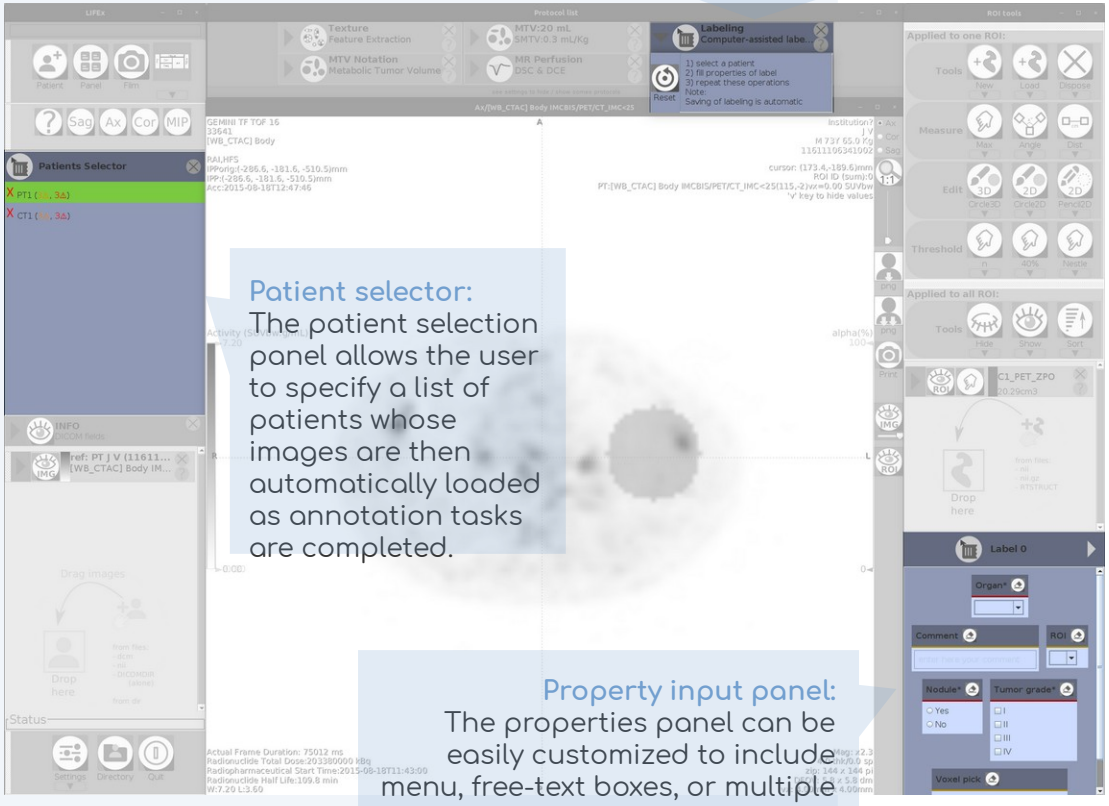
quick shortcut
Crtl+A: un/selection all

LIFEx v7.4.0
Annoucement
— LIFEx —

Labeling Tool

New

Controller: The controller panel shows the progress of the annotation job, which can be interrupted at any time and resume exactly where it was left off.



Patient selector: The patient selection panel allows the user to specify a list of patients whose images are then automatically loaded as annotation tasks are completed.

Property input panel: The properties panel can be easily customized to include menu, free-text boxes, or multiple choices for interactive annotation.

LabelingScript.txt

```
# Common
script = labeling
script.version = 1.0
output.props.file=.../res/
labeling.props

# properties
property0.title = Organ*
property0.type = dropdown
property0.value = 1|2|3|4

property1.title = Comment
property1.type = textfield

property2.title = ROI
property2.type = roiPick

property3.title = Nodule*
property3.type =
radiobutton
property3.value = Yes|No

property4.title = Tumor
grade*
property4.type = checkbox
property4.value = I|II|III|IV

property5.title = Voxel pick
property5.type = voxelPick
```

Awards thanks

Awards

2018

The Best of
THE AACR JOURNALS
A COLLECTION OF THE MOST-CITED RESEARCH ARTICLES

2020

Prix unicancer de l'innovation
6e édition

LIFEx v7.4.0
Annoucement
— LIFEx —

LIFEx is still evolving

C. Nioche

Other functionalities are being added every week.
Stay tuned !
We hope you go on enjoying LIFEx !

LIFEx is free of charge.

Please help us to keep it free by always quoting the LIFEx reference: (see below)

Please note that the correct reference to be cited is:
C Nioche, F Orlhac, S Boughdad, S Reuzé, J Goya-Outi, C Robert, C Pellot-Barakat, M Soussan, F Frouin, and I Buvat. **LIFEx: a freeware for radiomic feature calculation in multimodality imaging to accelerate advances in the characterization of tumor heterogeneity.** Cancer Research 2018; 78(16):4786-4789