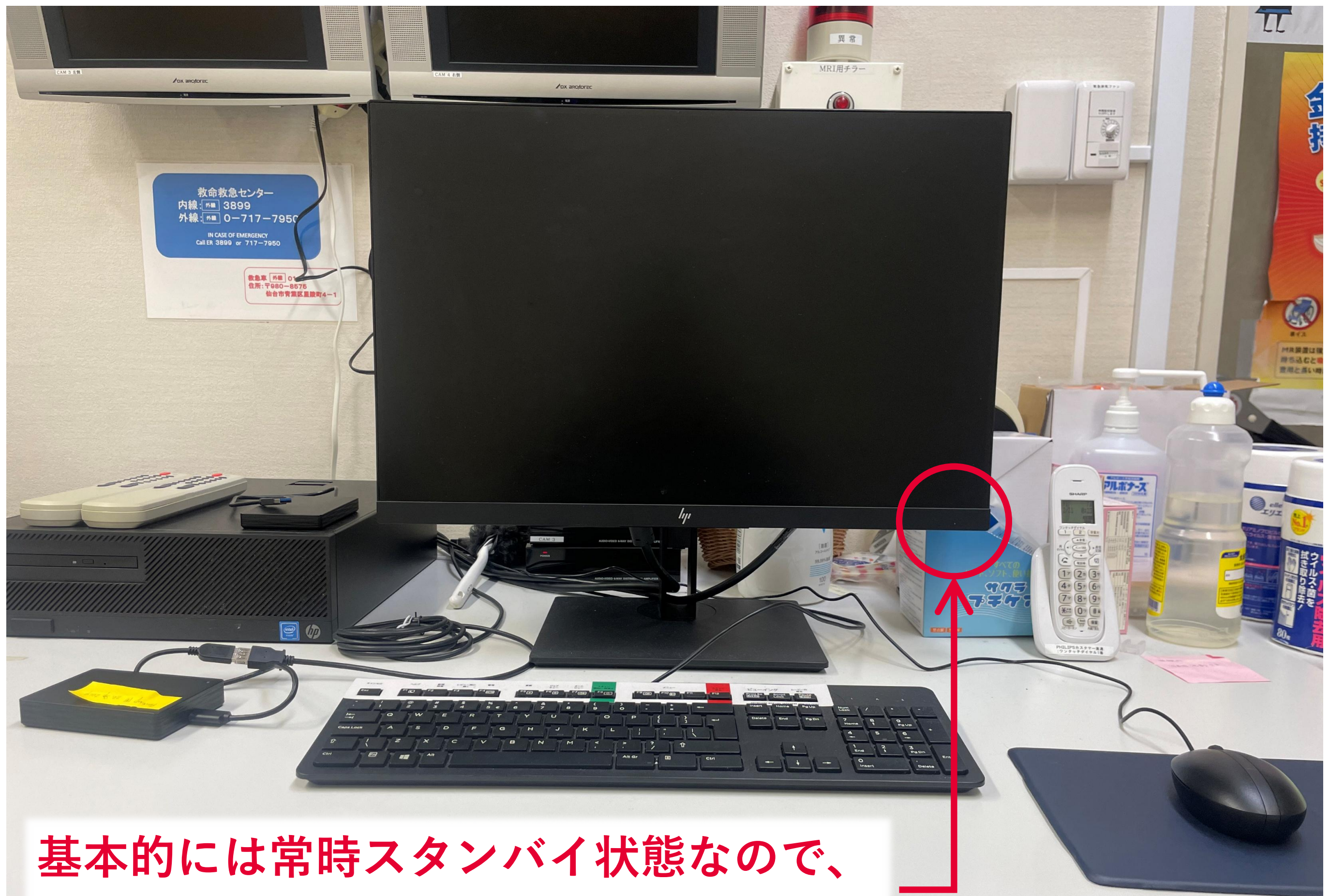


MRI撮像マニュアル



基本的には常時スタンバイ状態なので、
モニターONするとログイン画面に

PHILIPS

MR Systems Achieva dStream

Achieva dS



www.philips.com

Philips Medical
Veenpluis 4-6, 5600

一般利用者は
“mruser”の名前でログイン
パスワードは不要

Logon

Name

mruser

Password

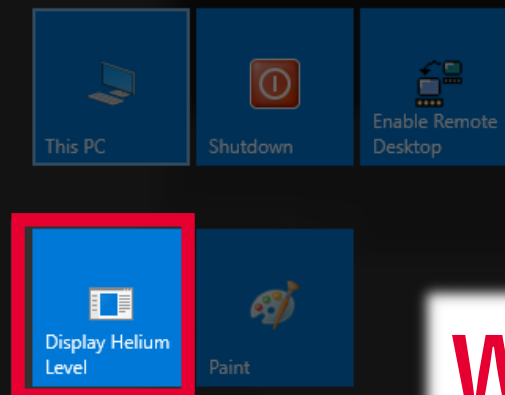
OK

Cancel

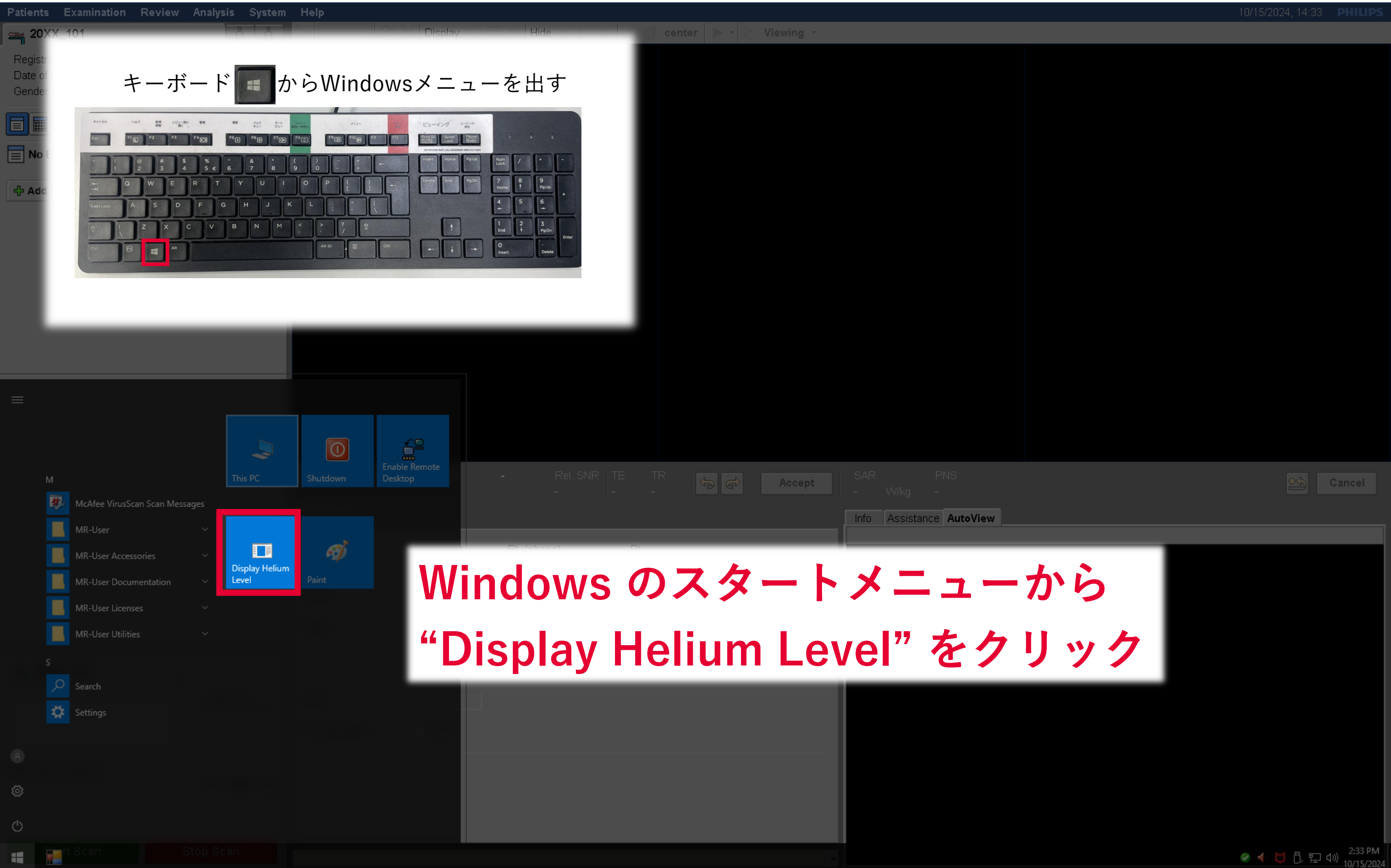
© Koninklijke Philips N.V. All rights reserved.

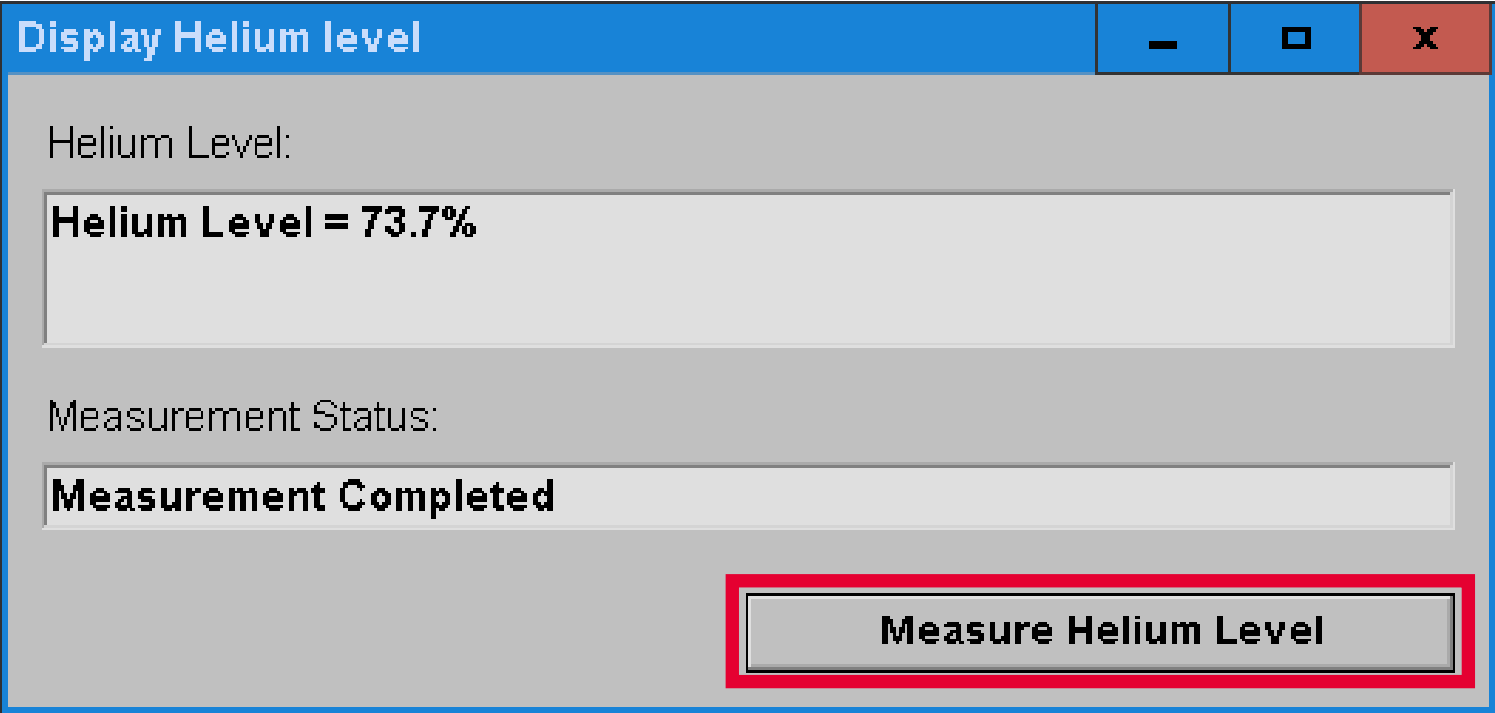
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To the maximum extent permitted by law, you shall not decompile and/or reverse engineer the software or any part thereof.

キーボード  からWindowsメニューを出す



**Windows のスタートメニューから
“Display Helium Level” をクリック**

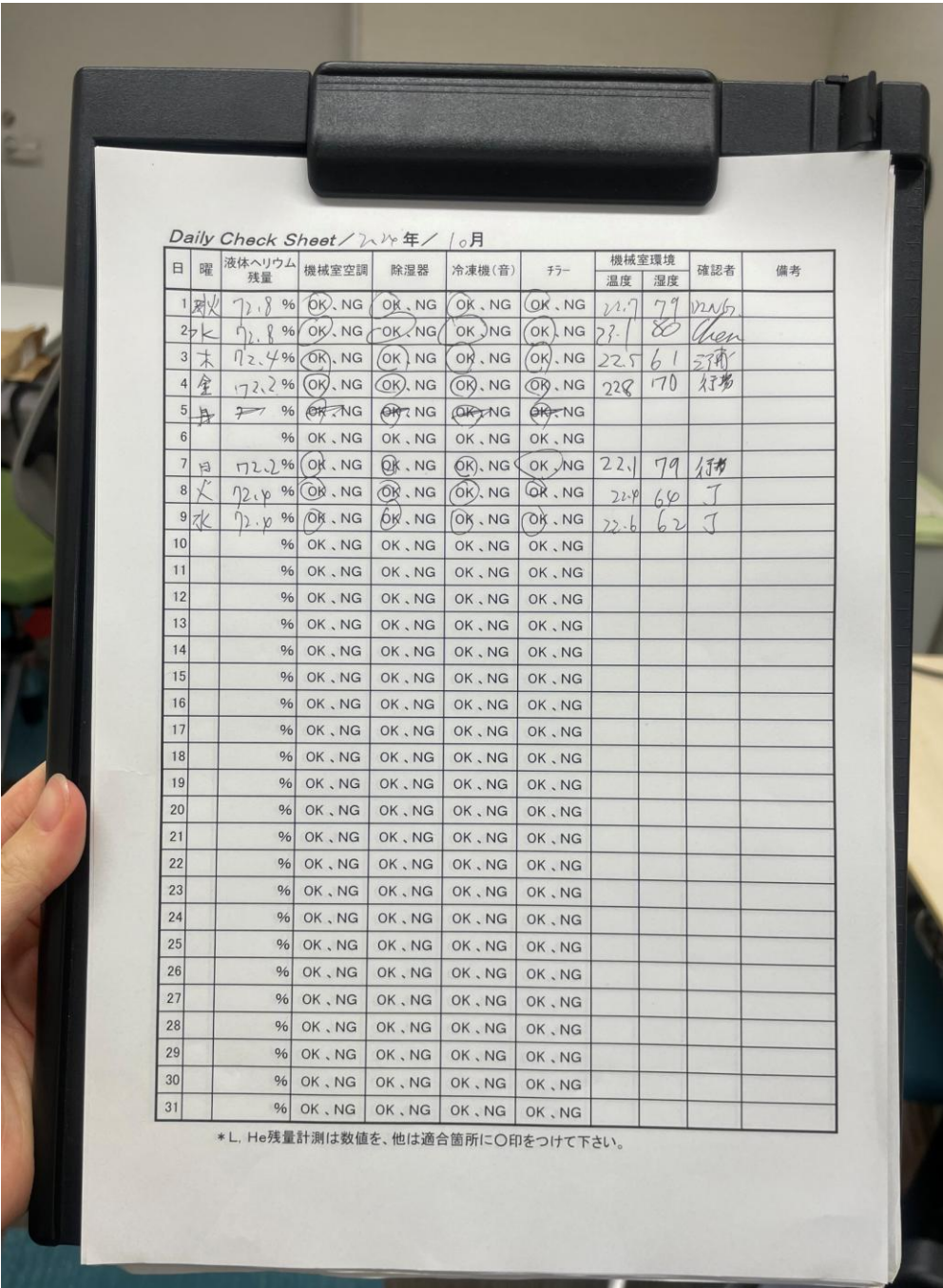




“Measure Helium Level”をクリック

極端に数値が低い場合は
責任者へ報告して指示を仰ぐ

※操作室内のDaily Check Seatを見て、
最近の数値を確認してください。



The screenshot displays the Philips MRI software interface. The top menu bar includes 'Patients', 'Examination', 'Review', 'Analysis', 'System', and 'Help'. The top right corner shows the date and time '10/28/2020, 14:31' and the 'PHILIPS' logo. The left sidebar contains patient information for '20XX_01' (Registration ID, Date of Birth: 01/01/1999, Gender: Female) and a 'Plan' button. Below this, it shows 'EXAMINATION_39...', '10/28/2020', and a status 'No ExamCard selected' with a timer '00:00:00'. A message 'Drag ExamCard or scan item here to add it to the scanlist' is present. The main area is dark. A red box highlights the 'ExamCards' dialog box, which has tabs for 'Philips', 'Hospital', and 'Other'. The 'Hospital' tab is selected, showing a list of folders: 'FBI', '20XX' (highlighted), 'fMRI default parameter', '1.5x1.5x2.0_28slice_TR2', 'Natasha_ht', and 'Toshiki'. Below this list, other folders like 'Guyagi', 'Takahara', 'NISSAN', 'Shyunboku Experiment', 'AirconMRI', 'Kelssy', 'Yamazaki', 'Yamotomo', 'Takeuchi', 'Nouchi', 'Dr_Tomita', 'Rugby', 's-pro', 'Tsukiura', and 'Hoshi' are visible. The bottom left has 'Start Scan' and 'Stop Scan' buttons. The bottom right shows a status bar with the message '14:31 ExamCards database has been locked and cannot be modified.'

“Hospital”タブから自分のフォルダを展開

The screenshot shows the Philips ExamCard selection interface. The top menu bar includes Patients, Examination, Review, Analysis, System, and Help. The left sidebar displays patient information for '20XX_01' (Registration ID: 20XX_01, Date of Birth: 01/01/1999, Gender: Female) and a status 'No ExamCard selected'. The main area is a large black rectangle. The bottom section features an 'ExamCards' panel with tabs for Philips, Hospital, and Other. The Philips tab is active, showing a list of ExamCards: '20XX' (highlighted with a red circle) and '20XX'. A red arrow points from the text box to the '20XX' folder icon. The bottom status bar shows a message: '14:31 ExamCards database has been locked and cannot be modified.'

ExamCard をドラッグ&ドロップ
または緑の+マークをクリック

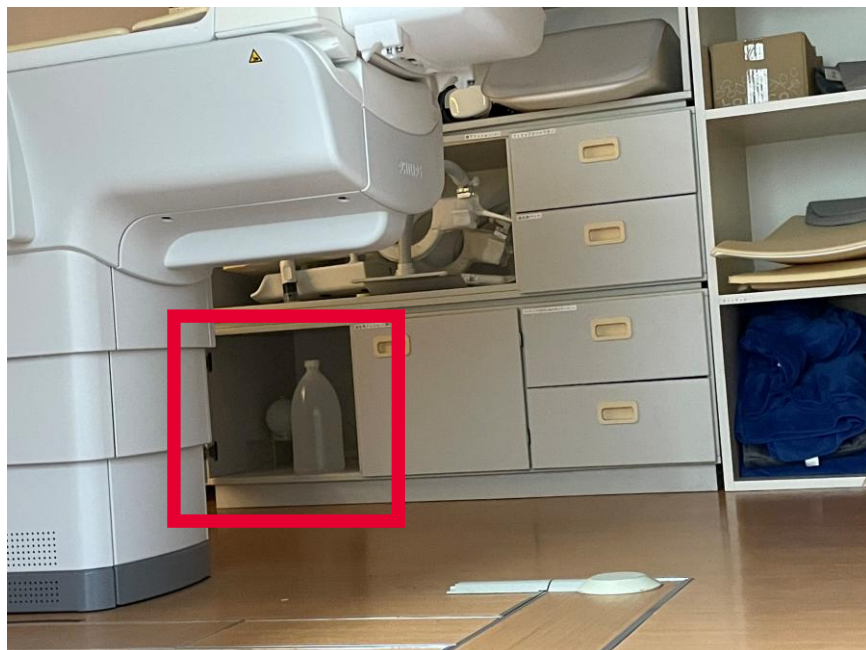
直前のMRI撮像から 1 時間以上あいた場合、
被験者撮像をする前に 「ファントム」 撮像を行います。
(MRIが問題なく稼働するかを確認するため)

■セッティング

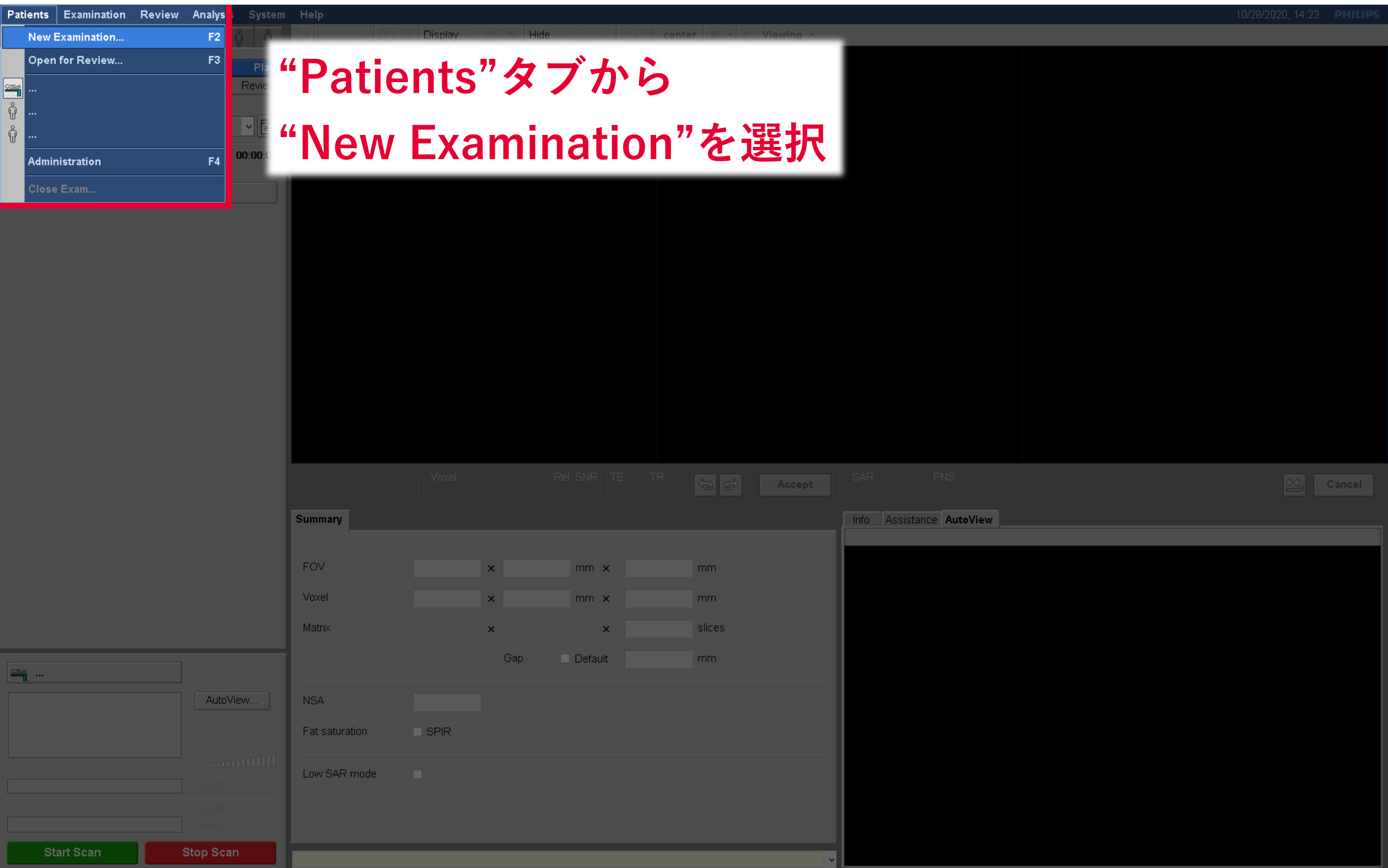


水ボトルを頭部の位置に置き
コイルもセットします。

通常通り、
ベッドをMRIの中にいれます。



水ボトルは棚の左下「ファントム」の
扉の中にあります。



New Examination

Patient

Patient name:

20XX_01

Registration ID:

20XX_01

Date of birth:

01/01/1999

mm/dd/yyyy

Age:

21

Years

Gender:

Male

Female

Phantom

Patient weight:

50

kg

Patient conditions

Pregnant

Yes

No

Possibly

Implant

Yes

No

Medical alerts:

Allergies:

Examination

Exam name:

Accession number:

Examination date:

Today

Tomorrow

10/28/2020

Referring Physician:

Allowed SAR mode

Normal

1st Level

More...

Patient Name	Date Of Bi...	Registration ID	Gender	Exam Name	Exam Date	Origin	Exam Re
2002_11	01/01/2000	2002_11	Male		10/28/2020	LOCAL	
2002_10	01/01/2000	2002_10	Female		10/28/2020	LOCAL	
2002_09	01/01/2000	2002_09	Male		10/28/2020	LOCAL	
20201028phantom	01/30/1990	20201028phantom				LOCAL	
2002_08	01/01/2000	2002_08			10/28/2020	LOCAL	

Cancel

Clear

Enter

Confirm and Proceed

“Phantom”を選択

“Confirm and Proceed”

Surveyと任意の1セッションを撮像

“Start Scan”

Start Scan

Stop Scan

14:33 ScanProtocol Survey is converted to QuickSurvey

Patients Examination Review Analysis System Help 10/28/2020, 14:39 PHILIPS

20XX_01

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender:

Plan

Survey
fluctuation fMRI
MPRAGE 0.7iso sag

Add new scan item..

Sc 1, 1 - SI 2/9
T1TFE /M
10/28/2020

Sc 1, 1 - SI 5/9
T1TFE /M
10/28/2020

Sc 1, 1 - SI 8/9
T1TFE /M
10/28/2020

ExamCard Properties

General Push Nodes

Patient Position	Supine
Patient Orientation	Head First
Laterality:	Unpaired
Anatomy:	Head
Anatomic Region:	Brain
Table Usage	Use
Heart Rate (beats/min)	60
Align Overlap (mm)	30
GeoLink Propagation	No
Geometries	fMRI
Disengage posterior coil	No
RF Excitation Mode	Off

Info Assistance AutoView

20XX_01

Survey
SI 5
FFE /M

Start Scan Stop Scan

SED: 0.0 kJ/kg

SAR:
PNS:

黄色いマークをダブルクリック

Patients Examination Review Analysis System Help

20XX_01

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender: Female

EXAMINATION_39..., 10/28/2020

20XX

1,1 ✓ Survey

fluctuation fMRI

MPRAGE 0.7iso sag

Add new scan item..

00:17:44

Sc 1, 1 - SI 2/9
T1TFE /M

Sc 1, 1 - SI 5/9
T1TFE /M

Sc 1, 1 - SI 8/9
T1TFE /M

fluctuation
12:25

Voxel 3.00 x 3.05 x 3.00

Tra 1.00

Rel. SNR 1.00

TE 30

TR 2500

Accept

SAR < 0.1 W/kg

PNS 78%

Cancel

Summary >>

FOV

Voxel

Matrix

NSA

Fat saturation

Info Assistance AutoView

20XX_01

Start Scan

Stop Scan

SED: 0.0 kJ/kg

SAR:

PNS:

撮像範囲を選択して“Accept”をクリック

※ファントムときも、何もない部分を撮像するとノイズが出るので
撮像範囲の設定を行う

Patients Examination Review Analysis System Help 10/28/2020, 14:43 PHILIPS

20XX_01

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender: Female

Plan Review

EXAMINATION_39..., 10/28/2020

20XX 00:17:44

1,1 ✓ Survey
fluctuation fMRI
MPRAGE 0.7iso sag

Add new scan item..

Sc 1, 1 - SI 2/9 10/28/2020 T1TFE /M
Sc 1, 1 - SI 5/9 10/28/2020 T1TFE /M
Sc 1, 1 - SI 8/9 10/28/2020 T1TFE /M

fluctuation 12:25 Voxel 3.00 x 3.05 x 3.00 Tra Rel. SNR 1.00 TE 30 TR 2500 SAR < 0.1 W/kg PNS 78% Accept Cancel

Summary >>

	RL (freq.)		RL (phase)		RL	
FOV	192	x		mm x		mm
Voxel		x		mm x		mm
Matrix		x		x	40	slices
Gap			Default		0	mm

NSA 1

Fat saturation ☒ SPIR

Info Assistance AutoView

20XX_01

Survey
SI 5
FFE /M

Start Scan Stop Scan

“Start Scan”をクリック

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender: Female

EXAMINATION_39..., 10/28/2020

20XX

1,1 ✓ Survey

fluctuation fMRI

MPRAGE 0.7iso sag

Add new scan item..

Sc 1, 1 - SI 2/9
T1TFE /M

Sc 1, 1 - SI 5/9
T1TFE /M

Sc 1, 1 - SI 8/9
T1TFE /M

Waiting for start of dynamic study...

OK Cancel

Contrast	Motion	Dyn/Ang	Postproc	Offc/Ang	Coils	Conflicts	
no			Total scan duration				05:18.9
no			Rel. SNR				1
no			Act. TR/TE (ms)				11 / 5.1
Manual start	no		ACQ voxel MPS (mm)				0.70 / 0.70 / 0.70

SAR: 0.0 W/kg
PNS: 61%

Info Assistance AutoView

20XX_01
fluctuation

fluctuation 00:00:57 SAR: 0.1 W/kg PNS: 78 %

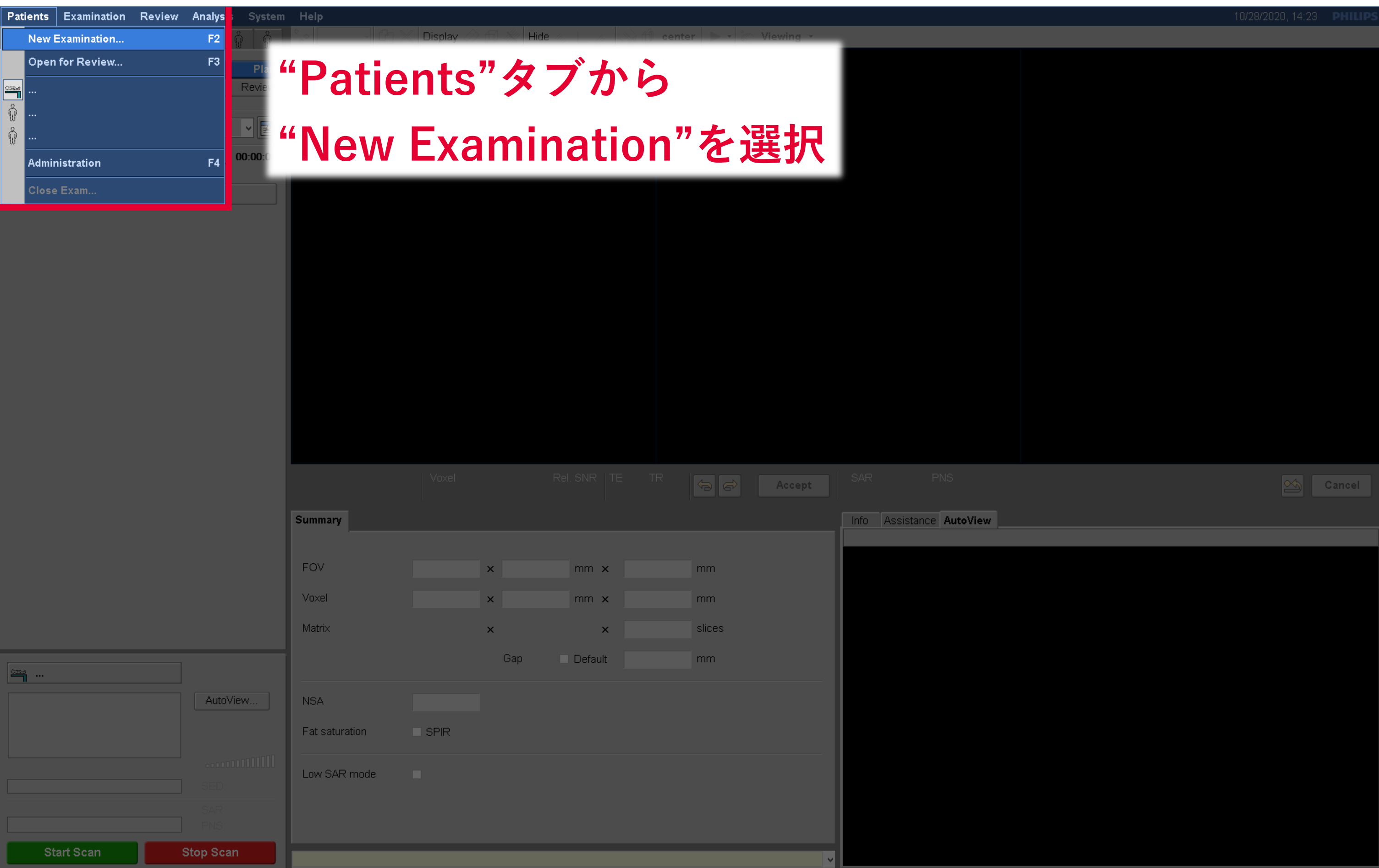
Start Scan Stop Scan

dB/dt 64.0 T/s
Sound Pressure Level (dB) 13.6

機能画像の場合は確認画面が表示される

“OK”をクリックすると撮像が始まる

問題がないことがわかれば、途中で“Stop Scan”で中止してOK



New Examination

Patient

Patient name: 20XX_01

Registration ID: 20XX_01

Date of birth: 01/01/1999 mm/dd/yyyy

Age: 21 Years

Gender: Male Female Phantom

Patient weight: 50 kg

Patient conditions

Pregnant Yes No Possibly

Implant Yes No

Medical alerts:

Allergies:

Examination

Exam name:

Accession number:

Examination date: Today Tomorrow 10/28/2020

Referring Physician:

Performing Physician:

Study Comments:

Allowed SAR mode Normal 1st Level More...

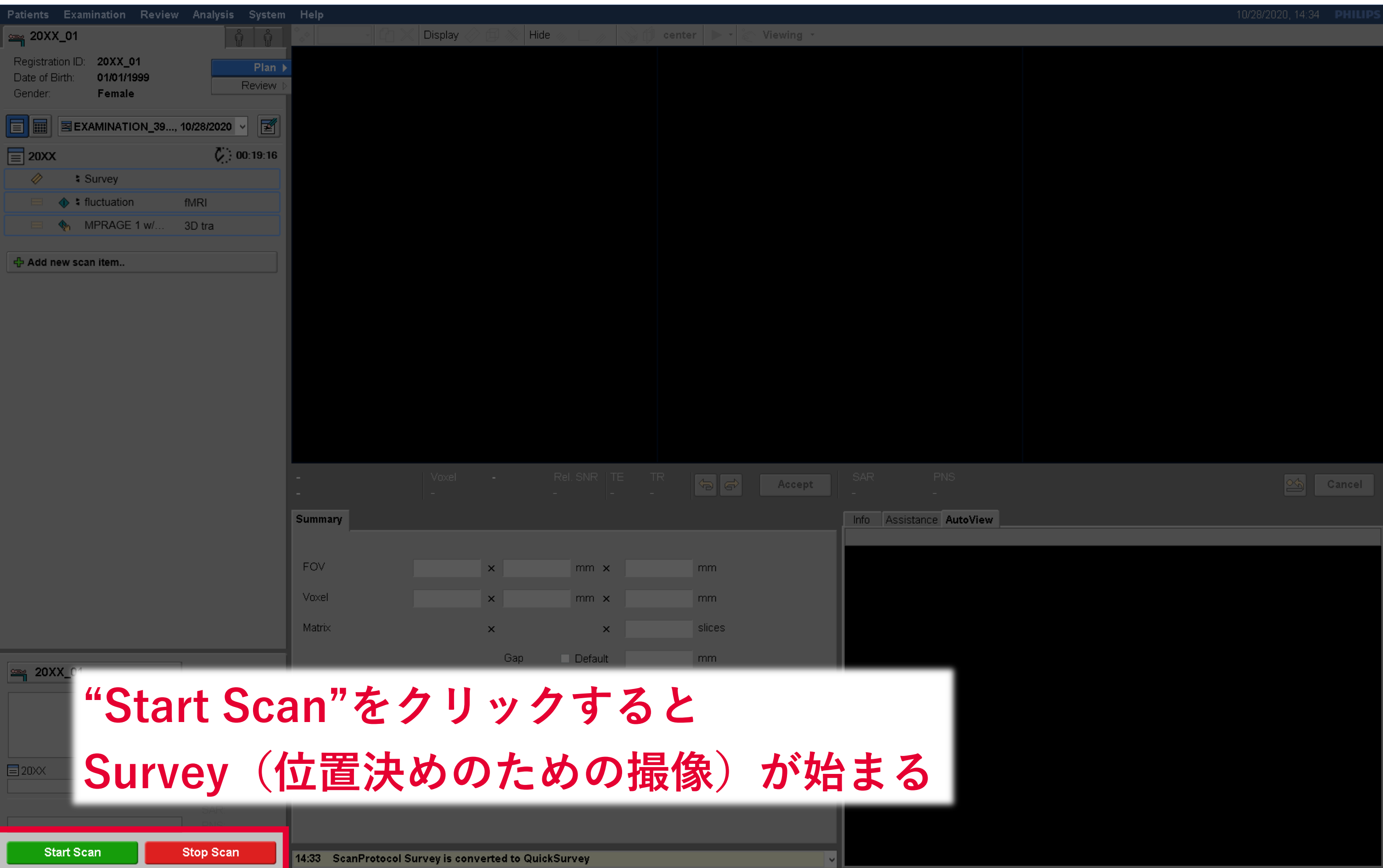
Patient Name	Date Of Bi...	Registration ID	Gender	Exam Name	Exam Date▼	Origin	Exam Re: ^
					10/28/2020	LOCAL	
					10/28/2020	LOCAL	
					10/28/2020	LOCAL	
					10/28/2020	LOCAL	
					10/27/2020	LOCAL	

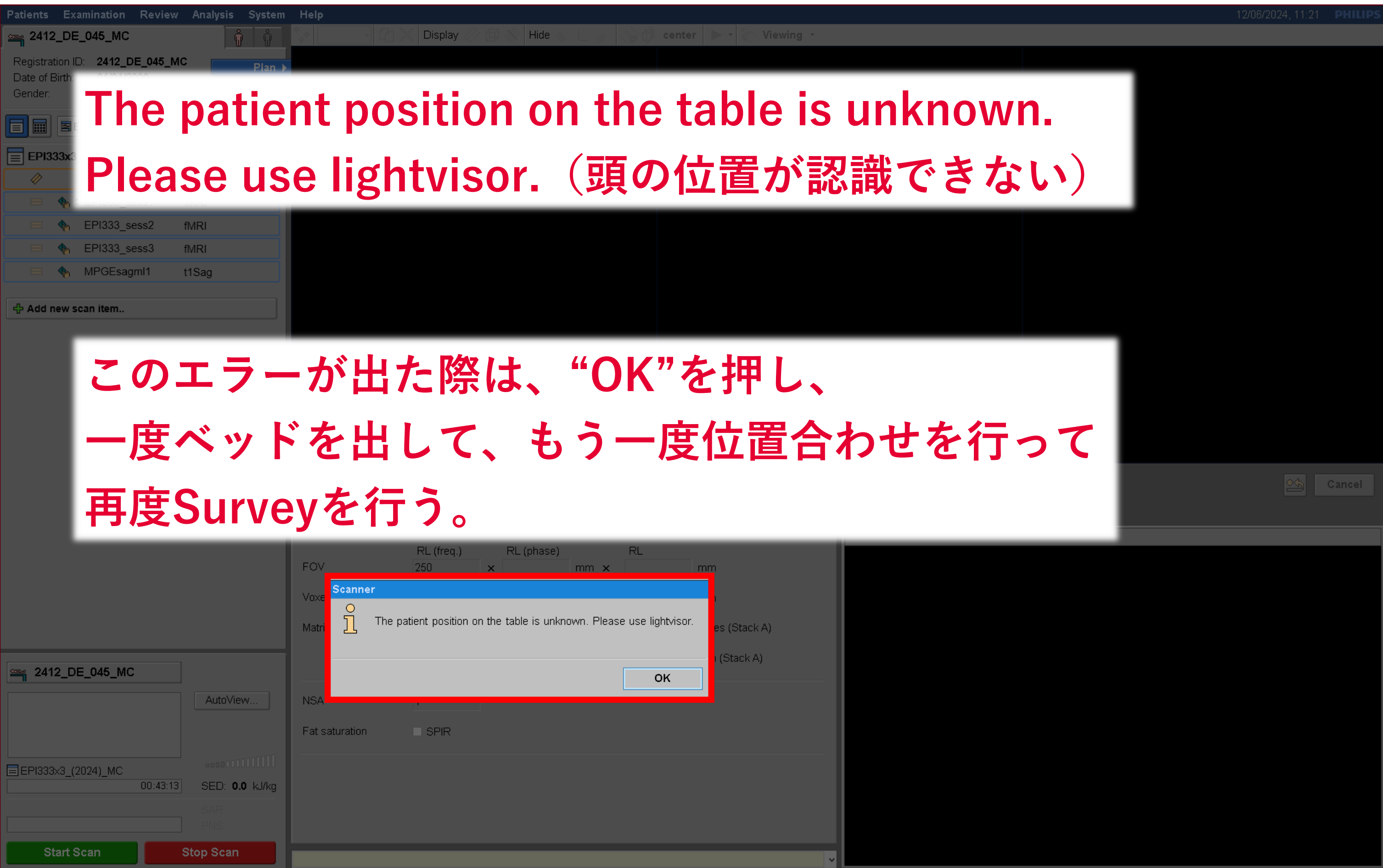
Cancel Clear Enter

Confirm and Proceed

被験者情報を入力

※Patient name: 承認されたID_被験者番号
(例: 2001_01)





Patients Examination Review Analysis System Help

10/28/2020, 14:39 PHILIPS

20XX_01

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender:

Plan ▶

Review

20XX

1.1 Survey
fluctuation fMRI
MPRAGE 0.7iso sag

Add new scan item..

Sc 1, 1 - SI 2/9
T1TFE /M

10/28/2020

Sc 1, 1 - SI 5/9
T1TFE /M

10/28/2020

Sc 1, 1 - SI 8/9
T1TFE /M

10/28/2020

ExamCard Properties

Close

General Push Nodes

Patient Position	Supine
Patient Orientation	Head First
Laterality:	Unpaired
Anatomy:	Head
Anatomic Region:	Brain
Table Usage	Use
Heart Rate (beats/min)	60
Align Overlap (mm)	30
GeoLink Propagation	No
Geometries	fMRI
Disengage posterior coil	No
RF Excitation Mode	Off

Info Assistance AutoView

20XX_01

Survey
SI 5
FFE /M

20XX_01

AutoView...

20XX

00:17:44

SED: 0.0 kJ/kg

SAR:

PNS:

Start Scan

Stop Scan

Yellow marker double-click

Patients Examination Review Analysis System Help 10/28/2020, 14:41 PHILIPS

20XX_01
Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender: Female

EXAMINATION_39..., 10/28/2020
20XX
1,1 ✓ Survey
fluctuation fMRI
MPRAGE 0.7iso sag

Add new scan item..

00:17:44

Sc 1, 1 - SI 2/9
T1TFE /M
10/28/2020

Sc 1, 1 - SI 5/9
T1TFE /M
10/28/2020

Sc 1, 1 - SI 8/9
T1TFE /M
10/28/2020

fluctuation
12:25

Voxel 3.00 x 3.05 x 3.00
Tra
Rel. SNR 1.00
TE 30
TR 2500

Accept

SAR < 0.1 W/kg
PNS 78%

Cancel

Summary >>

FOV
Voxel
Matrix

RL (freq.)
RL (phase)
RL

Gap ☐ Default 0 mm

NSA 1

Fat saturation ☒ SPIR

Info Assistance AutoView

20XX_01
Survey
SI 5

撮像範囲を選択して“Accept”をクリック

Start Scan Stop Scan

SED: 0.0 kJ/kg
SAR:
PNS:

Patients Examination Review Analysis System Help 10/28/2020, 14:43 PHILIPS

20XX_01

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender: Female

Plan ▶
Review ▶

EXAMINATION_39..., 10/28/2020

20XX 00:17:44

1,1 ✓ Survey
fluctuation fMRI
MPRAGE 0.7iso sag

+ Add new scan item..

Sc 1, 1 - SI 2/9 10/28/2020 T1TFE /M
Sc 1, 1 - SI 5/9 10/28/2020 T1TFE /M
Sc 1, 1 - SI 8/9 10/28/2020 T1TFE /M

fluctuation 12:25 Voxel 3.00 x 3.05 x 3.00 Tra Rel. SNR 1.00 TE 30 TR 2500 SAR < 0.1 W/kg PNS 78% Accept Cancel

Summary >>

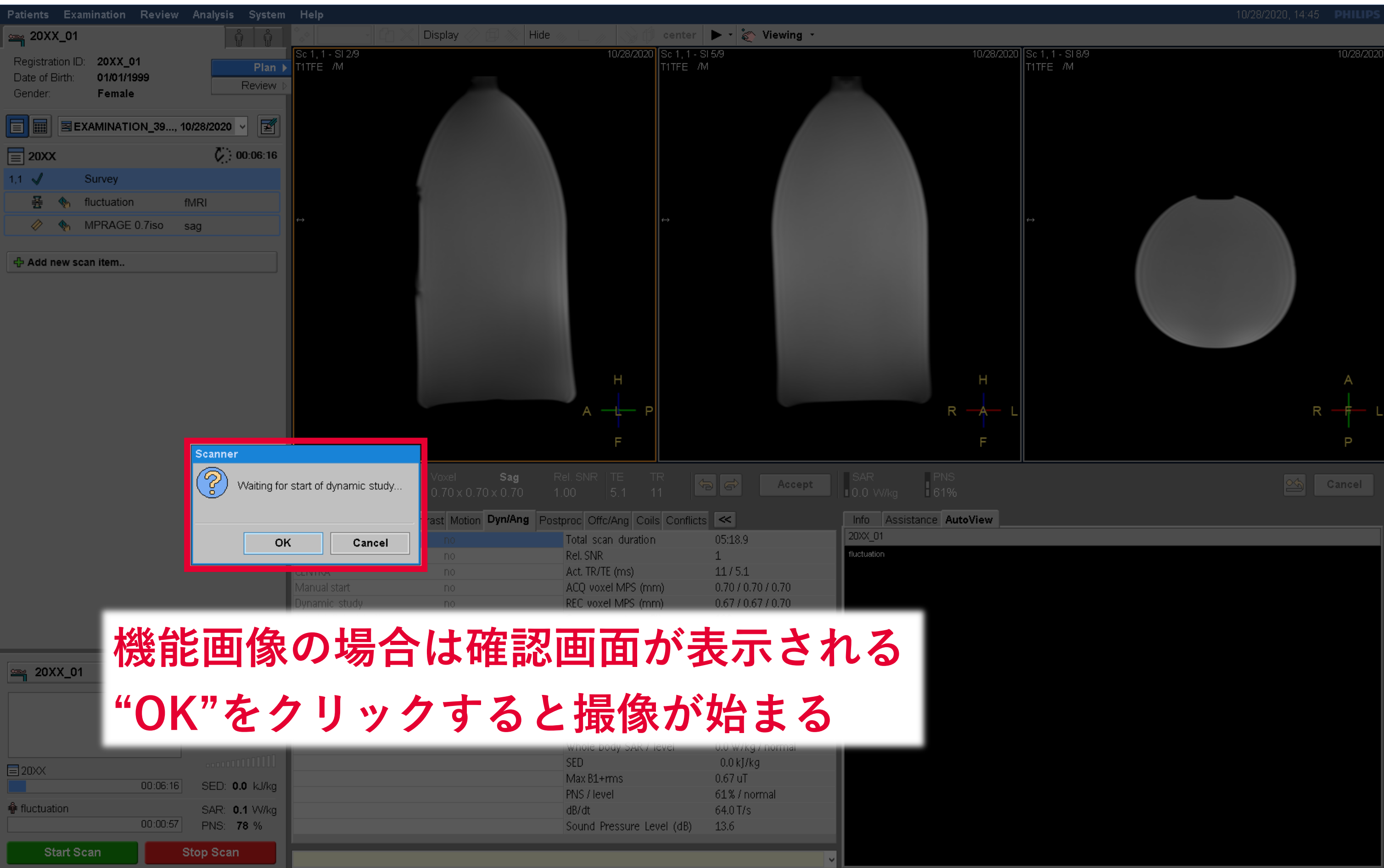
	RL (freq.)		RL (phase)		RL	
FOV	192	x		mm x		mm
Voxel		x		mm x		mm
Matrix		x		x	40	slices
			Gap	Default	0	mm
NSA	1					

Info Assistance AutoView

20XX_01
Survey
SI 5
FFE /M

Start Scan Stop Scan

“Start Scan”をクリック



機能画像の場合は確認画面が表示される
“OK”をクリックすると撮像が始まる

Patients Examination Review Analysis System Help

10/28/2020, 14:52 PHILIPS

20XX_01

Registration ID: 20XX_01
Date of Birth: 01/01/1999
Gender: Female

Plan
Review

EXAMINATION_39..., 10/28/2020

20XX 00:00:00

1,1 ✓ Survey

2,1 ✓ fluctuation fMRI

3,1 ✓ MPRAGE 0.7iso sag

Add new scan item..

Sc 1, 1 - SI 2/9
T1TFE /M

Sc 1, 1 - SI 5/9
T1TFE /M

Sc 1, 1 - SI 8/9
T1TFE /M

MPRAGE 0.7iso
05:19

Voxel
0.70 x 0.70 x 0.70

Sag

Rel. SNR
1.00

TE
5.1

TR
11

Accept

SAR
0.0 W/kg

PNS
61%

Cancel

Summary Geometry Contrast Motion Dyn/Ang Postproc Offc/Ang Coils Conflicts

Angio / Contrast enh.	no	Total scan duration	05:18.9
Quantitative flow	no	Rel. SNR	1
CENTRA	no	Act. TR/TE (ms)	11 / 5.1
Manual start	no	ACQ voxel MPS (mm)	0.70 / 0.70 / 0.70
Dynamic study	no	REC voxel MPS (mm)	0.67 / 0.67 / 0.70
Arterial Spin labeling	no	Scan percentage (%)	100
		Act. slice gap (mm)	0
		TFE shots	144
		TFE dur. shot / acq (ms)	2096.5 / 2036.1
		Min. TI delay	1068
		Act. WFS (pix) / BW (Hz)	3.261 / 133.2
		Min. WFS (pix) / Max. BW (...)	0.806 / 539.1
		Head SAR	< 8 %
		Whole body SAR / level	0.0 W/kg / normal
		SED	0.0 kJ/kg
		Max B1+rms	0.67 uT
		PNS / level	61 % / normal
		dB/dt	64.0 T/s
		Sound Pressure Level (dB)	13.6

Info Assistance AutoView

20XX_01

MPRAGE 0.7iso
SI 128
FFE /M

20XX_01

AutoView...

20XX 00:00:00

SED: 0.0 kJ/kg

SAR

PNS

Start Scan

Stop Scan

撮像が終わるとExamCardが青色に変わる

The screenshot shows the Philips MRI software interface. The 'System' menu is open, and the 'Exit' option is highlighted with a red box. A white text box with red text is overlaid on the menu, reading: “System” タブから “Exit” を選択

System Menu Options:

- Capture Screen (Ctrl+P)
- Manage Job Queue... (F6)
- Print History...
- Enable Autopush To DICOM Node
- Manage Hospital ExamCards (Ctrl+K)
- SmartExam Tools
- Edit Scan Control Parameters...
- System Tuning...
- Dicom Configuration
- SPT...
- Autovoice Settings...
- Image Display Settings...
- Contrast Preset Settings...
- Feedback...
- Exit**

MPRAGE 0.7iso Scan Parameters:

Parameter	Value
Voxel	0.70 x 0.70 x 0.70
Sag	
Rel. SNR	1.00
TE	5.1
TR	11

Scan Summary Table:

Parameter	Value
Angio / Contrast enh.	no
Quantitative flow	no
CENTRA	no
Manual start	no
Dynamic study	no
Arterial Spin labeling	no
Total scan duration	05:18.9
Rel. SNR	1
Act. TR/TE (ms)	11 / 5.1
ACQ voxel MPS (mm)	0.70 / 0.70 / 0.70
REC voxel MPS (mm)	0.67 / 0.67 / 0.70
Scan percentage (%)	100
Act. slice gap (mm)	0
TFE shots	144
TFE dur. shot / acq (ms)	2096.5 / 2036.1
Min. TI delay	1068
Act. WFS (pix) / BW (Hz)	3.261 / 133.2
Min. WFS (pix) / Max. BW (...)	0.806 / 539.1
Head SAR	< 8 %
Whole body SAR / level	0.0 W/kg / normal
SED	0.0 kJ/kg
Max B1+rms	0.67 uT
PNS / level	61 % / normal
dB/dt	64.0 T/s
Sound Pressure Level (dB)	13.6

Scan Status:

MPRAGE 0.7iso
SI 128
FFE /M

SED: 0.0 kJ/kg

SAR: 0.0 W/kg

PNS: 61%

Start Scan Stop Scan

1日に1回を目安に行うとよいので、
その日の最後の実験者は再起動してください



- ・ アプリ起動中（ログイン中）に、Windowsメニューからの再起動は極力行わない
- ・ 3:00にPhilips社から保守点検のためのモニタリングが入るので、Shutdownはしない

