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Online™

# Study of Osteoporotic Fractures (SOF)

## Study Collection Forms

### **Visit 4**

### **Physical Performance**

Physical Performance

Form Type: Clinic Examination

#### **LEGEND:**

**Raw form variable** names are located next to the question they represent and do not have a border around the variable name.

**Calculated variable** names are derived from other variables and have a border around the variable name. The calculated variables names are located in close proximity to the questions from which they were derived.

Some of the questions and measurements on these forms are not being released, and therefore no variable name is provided for them.

Do you have any problems from recent surgery, injury or other health conditions that might prevent you from standing up from a chair or walking quickly?

yes

**V4PROB**

no

Before we do each test, I'll describe it to you. Please tell me if you think that you shouldn't attempt the test because of the problems you described.

**Chair Stand** (Stand up 5 times)

- Armuse:  5 times w/o using arms at all  attempted but unable to complete 5 stands without help
- V4CHR**  5 times, uses arms part of time  did not attempt (refused) **V4STDARM**
- 5 times, uses arms all of time  attempted, but unable to stand up once without help

Time: **V4CHRTM** . \_\_\_\_ seconds to complete 5 stands

Was that as fast as you can do it while still feeling safe?

yes  no ➔ If no, repeat test. **V4CHFAST**

*Repeat time here if a second trial is required.*

Time: **V4CHTM2** . \_\_\_\_ seconds to complete 5 stands

**GAIT**

Aid used: **V4GAID**

- no aid  straight cane\*  quad cane\*  walker \*
- crutch\*  did not attempt/unable  attempted but unable

\* Categories with the same symbol have been combined into a single category.

**Usual Pace**

Trial 1

Number of steps \_\_\_\_\_  refused

Number of Seconds \_\_\_\_\_ . \_\_\_\_\_  unable

Trial 2

Number of steps \_\_\_\_\_  refused **V4STPLGT**

Number of Seconds \_\_\_\_\_ . \_\_\_\_\_  unable **V4WLKSPD**

**Rapid Pace**

Number of steps \_\_\_\_\_  refused **V4RSTPLT**

Number of Seconds \_\_\_\_\_ . \_\_\_\_\_  unable **V4RWKSPD**

Do you have any problems from recent surgery, injury or other health conditions that might prevent you from standing up from a chair or walking quickly?

yes

no

Before we do each test, I'll describe it to you.  
Please tell me if you think that you shouldn't attempt the test because of the problems you described.

**Chair Stand** (Stand up 5 times)

- Armuse:  5 times w/o using arms at all  attempted but unable to complete 5 stands without help  
 5 times, uses arms part of time  did not attempt (refused)  
 5 times, uses arms all of time  attempted, but unable to stand up once without help

Time: \_\_\_\_\_ . \_\_\_\_\_ seconds to complete 5 stands

Was this as fast as you can do it while still feeling safe?

yes  no ➔ If no, repeat test.

*Repeat time here if a second trial is required.*

Time: \_\_\_\_\_ . \_\_\_\_\_ seconds to complete 5 stands

**GAIT**

Aid used:

- no aid  straight cane  quad cane  walker  
 crutch  did not attempt/unable  attempted but unable

**Usual Pace**

Trial 1

Number of steps \_\_\_\_\_  refused

Number of Seconds \_\_\_\_\_ . \_\_\_\_\_  unable

Trial 2

Number of steps \_\_\_\_\_  refused

Number of Seconds \_\_\_\_\_ . \_\_\_\_\_  unable

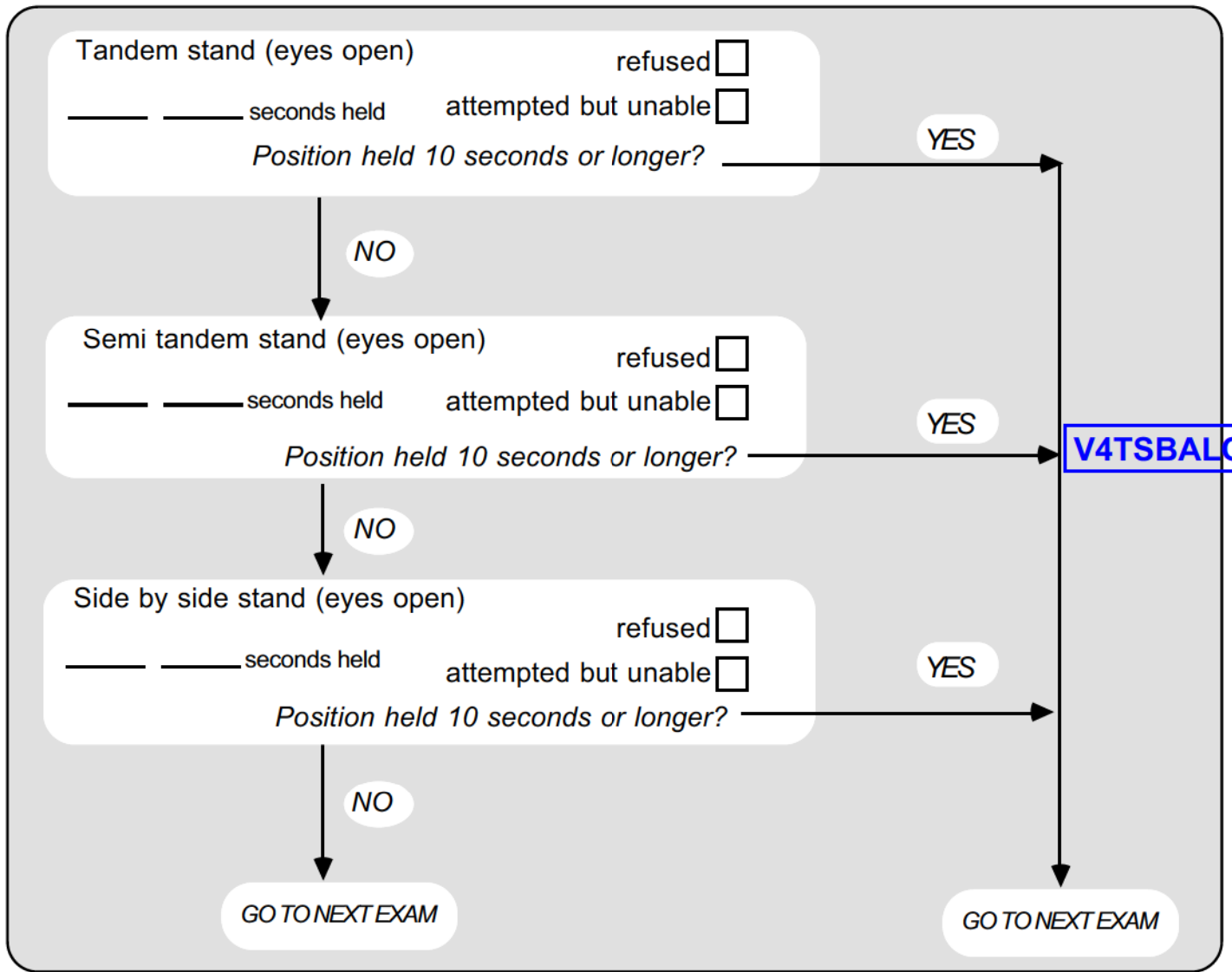
Rapid Pace

Number of steps \_\_\_\_\_  refused

Number of Seconds \_\_\_\_\_ . \_\_\_\_\_  unable

Length of walking course

- 2 meter  
 3 meter  
 4 meter  
 5 meter  
 6 meter



**Squat test**

Was participant able to perform chair stand test without examiner assistance?

**V4EXASS**  Yes  No

Perform squat test  Go to next exam

**V4SQUAT**

- Completed without assistance  Unable
- Completed with assistance of arms  Refused
- Completed with examiner assistance

**Grip Strength**

Stroke or injury causing weakness?

No - test both sides     Yes - test unaffected side

Recent worsening of pain or arthritis?

No - test both sides     Yes - test unaffected side

|   |                                   |                                   |
|---|-----------------------------------|-----------------------------------|
|   | Right                             | Left                              |
|   | <b>V4GRPAVG</b>                   |                                   |
|   | <b>V4GRPMAX</b>                   |                                   |
|   | kg                                | kg                                |
| } | <b>V4GRPRAV</b>                   | <b>V4GRPLAV</b>                   |
|   | kg                                | kg                                |
|   | <input type="checkbox"/> refused  | <input type="checkbox"/> refused  |
|   | <input type="checkbox"/> unable   | <input type="checkbox"/> unable   |
|   | <input type="checkbox"/> weakened | <input type="checkbox"/> weakened |

**Quadriceps Strength**

Do you have an aneurism in your brain?

In the past four weeks, have you been hospitalized for a heart attack or myocardial infarction?

Neither     MI    If yes to either, then don't do this test. ("Don't know" is considered a "No".)

Aneurism     Both

refused     unable

Have you had a knee replacement or fracture or surgery on either leg in the past 8 weeks?

None of the above     Fracture

Knee replacement     Surgery

**If yes to any condition, then only test unaffected side.**

Lever arm setting \_\_\_\_\_

Length of lever arm \_\_\_\_\_ cm (Port)

|             |                 |                 |                 |     |
|-------------|-----------------|-----------------|-----------------|-----|
|             | Trial 1         |                 | Trial 2         |     |
| RIGHT: peak | <b>V4QRAVG</b>  | lbs             | <b>V4QRMAX</b>  | lbs |
| avg         | <b>V4QRAAVG</b> | lbs             | <b>V4QRAMAX</b> | lbs |
| -----       |                 |                 |                 |     |
| LEFT: peak  | <b>V4QLAVG</b>  | lbs             | <b>V4QLMAX</b>  | lbs |
| avg         | <b>V4QLAAVG</b> | lbs             | <b>V4QLAMAX</b> | lbs |
|             | <b>V4QMAXA</b>  |                 | <b>V4QAVGA</b>  |     |
|             |                 | <b>V4QRLMAX</b> | <b>V4QLRAVG</b> |     |

**Grip Strength**

Stroke or injury causing weakness?

No - test both sides     Yes - test unaffected side

Recent worsening of pain or arthritis?

No - test both sides     Yes - test unaffected side

Right

Left

\_\_\_\_\_ kg

\_\_\_\_\_ kg

\_\_\_\_\_ kg

\_\_\_\_\_ kg

refused

refused

unable

unable

weakened

weakened

**Tandem Stand**

Tandem stand (eyes open)

refused

\_\_\_\_\_ seconds held    attempted but unable

Position held 10 seconds or longer?

YES

NO

Semi tandem stand (eyes open)

refused

\_\_\_\_\_ seconds held    attempted but unable

Position held 10 seconds or longer?

YES

NO

Side by side stand (eyes open)

refused

\_\_\_\_\_ seconds held    attempted but unable

Position held 10 seconds or longer?

YES

NO

GO TO NEXT EXAM

GO TO NEXT EXAM

Screening questions:

HAVE YOU HAD:

|  | yes*                     | no                       | don't know               |
|--|--------------------------|--------------------------|--------------------------|
| Diarrhea or vomiting in the past 24 hours?                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| One or more cups of a caffeinated beverage in the past 12 hours? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| One or more drinks of alcohol in the past 12 hours?              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**\*If yes, do not continue. This participant no longer a BCC participant**

POSITION

- SUPINE                       PROPPED UP (sitting or half sitting)

MEASUREMENTS

Electrode Positions

|             | <u>1 . Right Hand/<br/>Right Foot</u> | <u>2 . Right Hand/<br/>Left Foot</u> |
|-------------|---------------------------------------|--------------------------------------|
| Resistance  | _ _ _                                 | _ _ _                                |
| Reactance   | _ _ _                                 | _ _ _                                |
| Impedance   | _ _ _                                 | _ _ _                                |
| Phase Angle | _ _ _ . _                             | _ _ _ . _                            |

\* If resistance measures differ by more than 20, repeat both sets of measurements.

REPEAT MEASUREMENTS

Electrode Positions

|             | <u>1 . Right Hand/<br/>Right Foot</u> | <u>2 . Right Hand/<br/>Left Foot</u> |
|-------------|---------------------------------------|--------------------------------------|
| Resistance  | _ _ _                                 | _ _ _                                |
| Reactance   | _ _ _                                 | _ _ _                                |
| Impedance   | _ _ _                                 | _ _ _                                |
| Phase Angle | _ _ _ . _                             | _ _ _ . _                            |

Amputation, cast, or other reason for alternative hand electrode placement?

- Yes     No



Alternative electrode positions

- |                             |                              |
|-----------------------------|------------------------------|
| 1 . Left hand/<br>Left foot | 2 . Left hand/<br>Right foot |
|-----------------------------|------------------------------|

# TRICEPS MUSCLE STRENGTH

PPT. ID \_\_\_\_\_

Acrostic:

Examiner ID# \_\_\_\_\_

Have you ever had a stroke or injury or mastectomy that has made one side weaker than the other?

NO  → Proceed with right side only

**V4HWK**

YES  → Test right and left sides.

**Test** (2 trials)

**Force**

**Overcome subject's resistance?**

RIGHT SIDE

Triceps

1. \_\_\_\_\_ kg

Refused    Unable



Yes    No



**V4TRMAXR**

**V4TRRS**

**V4TRAVGR**

Refused    Unable



Yes    No



2. \_\_\_\_\_ kg

**Test** (left side if indicated)

**Force**

**Overcome subject's resistance?**

LEFT SIDE

Triceps

1. \_\_\_\_\_ kg

Refused    Unable



Yes    No



**V4TRMAXL**

**V4TLRS**

**V4TRAVGL**

Refused    Unable



Yes    No



2. \_\_\_\_\_ kg



Have you ever had a stroke or injury or mastectomy that has left one arm weaker or clumsier than the other?

**V4CLUM**  YES

NO

Which side?

- Right → Test LEFT side
- Left → Test RIGHT side
- Both → Test a) "better" or b) dominant side

Dominant side (from cover page)

- Right → Test RIGHT side
- Left → Test LEFT side
- Ambidextrous → Test right side

In the past 24 hours, have you used any medication to help you sleep, or relax, or for anxiety of nerves, such as Valium, Xanax, Librium, Elavil, Dalmane, and others?

**V4M24**

- Yes     No     DK

**HAND V4RTHAND**

- Right     Left     Unable to test     Refused

| Trial # | Delay | Response time   | Total time      | Unable*                  | Machine malfunction      |
|---------|-------|-----------------|-----------------|--------------------------|--------------------------|
| 1       | 5 sec | <b>V4HRTAVG</b> | <b>V4HTTAVG</b> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2       | 3 sec | <b>V4HRTSTD</b> | <b>V4HTTSTD</b> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3       | 3 sec | <b>V4HRTCV</b>  | <b>V4HTTCV</b>  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4       | 4 sec | <b>V4HRAV</b>   | <b>V4HTAV</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5       | 2 sec | <b>V4HRST</b>   | <b>V4HTST</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6       | 5 sec | <b>V4HRCV</b>   | <b>V4HTCV</b>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7       | 2 sec | -----           | -----           | <input type="checkbox"/> | <input type="checkbox"/> |
| 8       | 1 sec | -----           | -----           | <input type="checkbox"/> | <input type="checkbox"/> |
| 9       | 1 sec | -----           | -----           | <input type="checkbox"/> | <input type="checkbox"/> |
| 10      | 4 sec | -----           | -----           | <input type="checkbox"/> | <input type="checkbox"/> |

\*Participant misses pad or is inattentive more than once for a given trial.

### Functional Reach

Is the participant able to stand on both feet for 30 seconds?

**V4FRSTD**

Yes       No       Refused

↓ ↓  
**SKIP THIS TEST**

Side tested:

Right       Left      **V4FRSID**

Is the participant able to reach her arm straight up over her head?

Yes       No      **V4FRRCH**

↓  
**PROCEED WITH TEST**

**Functional reach scores (no aids permitted)**

(round to nearest inch using conventional rounding)

Start value (inches)    Stop value (inches)

|                 |                                       |                                      |  |
|-----------------|---------------------------------------|--------------------------------------|--|
| <b>Trial #1</b> | <input type="text" value="V4FRDIF1"/> | <input type="checkbox"/> refused     | <input type="checkbox"/> unable or stepped out 2 times |
| <b>Trial #2</b> | <input type="text" value="V4FRDIF2"/> | <input type="checkbox"/> refused     | <input type="checkbox"/> unable or stepped out 2 times |
| <b>Trial #3</b> | <input type="text" value="V4FRDIF3"/> | <input type="checkbox"/> refused     | <input type="checkbox"/> unable or stepped out 2 times |
|                 | <input type="text" value="V4FRAVG"/>  | <input type="text" value="V4FRMAX"/> |  |

RIGHT EAR

1. Do you have any ringing or hissing sounds in your RIGHT ear?

**V4RTERNG**  Yes  No  Don't know

2. Do you usually wear a hearing aid in your RIGHT ear?

**V4RTEAID**  Yes  No



(If yes, ask ppt to remove hearing aid and proceed with testing.)

3. Was the tympanic membrane visible?

**V4RTETYM**  Yes  No



Did you see an obstruction? **V4RTEOBS**

- No ( $\pm$  a little wax)
- Partial
- Yes - completely blocked

**V4HRIMP**

# Hearing Test

## RIGHT EAR

### TONES AT 40 dB

#### Participant warning signal

**V4RTE40W**     Heard             Not Heard             Equivocal

#### 1000 Hz

**V4RTE401**     Heard             Not Heard             Equivocal

#### 2000 Hz

**V4RTE402**     Heard             Not Heard             Equivocal

#### 4000 Hz

**V4RTE404**     Heard             Not Heard             Equivocal

#### 500 Hz

**V4RTE405**     Heard             Not Heard             Equivocal

(If participant does not hear a tone, repeat complete test.)

### TONES AT 25 dB

#### Participant warning signal

**V4RTE25W**     Heard             Not Heard             Equivocal

#### 1000 Hz

**V4RTE251**     Heard             Not Heard             Equivocal

#### 2000 Hz

**V4RTE252**     Heard             Not Heard             Equivocal

#### 4000 Hz

**V4RTE254**     Heard             Not Heard             Equivocal

#### 500 Hz

**V4RTE255**     Heard             Not Heard             Equivocal

(If participant does not hear a tone, repeat complete test.)

LEFT EAR

1. Do you have any ringing or hissing sounds in your LEFT ear?

**V4LFRNG**  Yes  No  Don't know

2. Do you usually wear a hearing aid in your LEFT ear?

**V4LFEAID**  Yes  No



(If yes, ask ppt to remove hearing aid and proceed with testing.)

3. Was the tympanic membrane visible?

**V4LFETYM**  Yes  No



Did you see an obstruction?

**V4LFEOBS**

- No ( $\pm$  a little wax)
- Partial
- Yes - completely blocked

Hearing Test  
LEFT EAR

TONES AT 40 dB

Participant warning signal

**V4LFE40W**     Heard             Not Heard             Equivocal

1000 Hz

**V4LFE401**     Heard             Not Heard             Equivocal

2000 Hz

**V4LFE402**     Heard             Not Heard             Equivocal

4000 Hz

**V4LFE404**     Heard             Not Heard             Equivocal

500 Hz

**V4LFE405**     Heard             Not Heard             Equivocal

(If participant does not hear a tone, repeat complete test.)

TONES AT 25 dB

Participant warning signal

**V4LFE25W**     Heard             Not Heard             Equivocal

1000 Hz

**V4LFE251**     Heard             Not Heard             Equivocal

2000 Hz

**V4LFE252**     Heard             Not Heard             Equivocal

4000 Hz

**V4LFE254**     Heard             Not Heard             Equivocal

500 Hz

**V4LFE255**     Heard             Not Heard             Equivocal

(If participant does not hear a tone, repeat complete test.)

Two practice trials:

1. \_\_\_\_\_ liters/min

2. \_\_\_\_\_ liters/min

Actual three trials:

1. \_\_\_\_\_ liters/min

refused

unable

**V4PEFAVG**

2. \_\_\_\_\_ liters/min

refused

unable

**V4PEFMAX**

3. \_\_\_\_\_ liters/min

refused

unable

In what position did the participant perform this test?

Standing up

refused

**V4PEFPOS**

Sitting

unable

Lying down

Using your subjective judgment, record whether the participant had difficulty with this procedure (check all that apply): YES=1 NO=0

**V4PEFNOD**  No difficulty

**V4PEFUND**  Did not appear to understand instructions

**V4PEFSL**  Could not achieve tight seal

**V4PEFCOU**  Coughing, breathless

### Height & Weight

Height Measurement Using the Harpenden Stadiometer

Measurement 1: \_\_\_\_\_ mm

Measurement 3\*: \_\_\_\_\_ mm

Measurement 2: \_\_\_\_\_ mm

Measurement 4\*: \_\_\_\_\_ mm

Participant Facing:  Forward

Sideways

\*Perform measurements 3 and 4 if measurements 1 and 2 differ by 4 or more millimeters

WEIGHT

\_\_\_\_\_ Kgs.

### Peak Expiratory Flow

Two practice trials:

1. \_\_\_\_\_ liters/min

2. \_\_\_\_\_ liters/min

Actual three trials:

1. \_\_\_\_\_ liters/min

refused

unable

2. \_\_\_\_\_ liters/min

refused

unable

3. \_\_\_\_\_ liters/min

refused

unable

In what position did the participant perform this test?

Standing up

refused

Sitting

unable

Lying down

Using your subjective judgment, record whether the participant had difficulty with this procedure (check all that apply):

No difficulty

Did not appear to understand instructions

Could not achieve tight seal

Coughing, breathless

### Height & Weight

Height Measurement Using Wall and Right Angle

Measurement 1: \_\_\_\_\_ cm

X 10 \_\_\_\_\_ mm

Measurement 2: \_\_\_\_\_ cm

X 10 \_\_\_\_\_ mm

Participant Facing:  Forward

Sideways

\*Perform measurements 3 and 4 if measurements 1 and 2 differ by 4 or more millimeters

#### WEIGHT

\_\_\_\_\_ lbs.

\_\_\_\_\_ Kgs.

(not to be entered)



# TIMED MANUAL PERFORMANCE (Williams Board)

PPT. ID \_\_\_\_\_

1. Compartment  
and Fastener

Open (seconds)

Close (seconds)

Refused   Unable

Door knob

\_\_\_ . \_\_\_

\_\_\_ . \_\_\_

Round knob

\_\_\_ . \_\_\_

\_\_\_ . \_\_\_

Cabinet lock

\_\_\_ . \_\_\_

\_\_\_ . \_\_\_

2. Hand participant used:

V4HNDDR

V4TMP

Right

Left

Both

V4TMPMAX

V4TMP10S

V4TMPDO5

3. Was the participant using or wearing any special devices on her hand such as handsplints, casts, hooks, etc?

Yes

No

4. Did the participant have any obvious visual problems that interfered with this test?

Yes

No

V4VISUAL

**Examiner assessment of frailty**

Defining frailty as a combination of the following characteristics - weak, unsteady, and fragile, what is your overall assessment of this participant's level of frailty?

**V4FRAIL**

- Not at all frail       Somewhat frail       Extremely frail

**Exam explanations and comments**

If participant did not perform certain sections of this visit 4 exam, please briefly record what the section was and the reason why it wasn't performed. Include equipment problems as well as participant's reasons.

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**Examiner assessment of frailty**

Defining frailty as a combination of the following characteristics - weak, unsteady, and fragile, what is your overall assessment of this participant's level of frailty?

- Not at all frail       Somewhat frail       Extremely frail

**Exam explanations and comments**

If participant did not perform certain sections of this visit 4 exam, please briefly record what the section was and the reason why it wasn't performed. Include equipment problems as well as participant's reasons.

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