

1. **DETERMINE** if this is an initial assessment or if patient has a previous osteoporosis diagnosis

2. Look for current or prior fractures after age 50

**Tool Tip:** Hovering over any wording with the “i” information icon beside it, such as fracture after age 50, will give you information about that area

**Tool Tip:** Any wording colour coded in blue is clickable and will open the respective document, for example the 2010 Clinical Guidelines

3. Screen for risk factors to help you stratify fracture risk if a new assessment or, if risk has changed, and a follow-up assessment is being completed

### 1 History

Initial Assessment: Osteoporosis Dx:  Yes  No  
 Follow-Up: Previous Osteoporosis Dx:  Yes  No

Fracture after Age 50?  Yes  No [2010 Clinical Guidelines](#)

#### Identify risk factors for fractures and falls:

Prior fracture after age 50 years:	Yes	No
Hip	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wrist	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vertebral	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proximal humerus	<input type="checkbox"/>	<input type="checkbox"/>
Pelvis	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other, specify <input type="text" value="Femur"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Prolonged glucocorticoid use	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parental hip fracture	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rheumatoid arthritis	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Menopause at age < 45 years	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Conditions or Medications	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4. **REVIEW** lifestyle

5. Pay special attention to any falls, especially >2 in the past month – if yes, investigate balance/gait, medications

**Tool Tip:** If ‘yes’ to ‘has fallen > or equal to 2 times in the past 12 months, click (falls assessment) to complete a falls assessment

6. Look for major body weight loss

7. Assess calcium intake and emphasize dietary calcium

### 2 Lifestyle Review

	Yes	No
Current smoker	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Consumes ≥ 3 units (oz.) alcohol/day	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Has fallen ≥ 2 times in past 12 months <a href="#">(Falls Assessment)</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low body weight (<60 kg) or major weight loss	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Diet + supplement calcium intake ≤ 1200 mg/day	<input type="checkbox"/>	<input checked="" type="checkbox"/>

8. **CONTINUE** assessing risk

9. Conduct a ‘Get/Timed up and go test’ if needed

**Tool Tip:** The Get/Timed up and go test is a custom form and will automatically integrate the results in a clinical note once completed

10. Look for changes in height and rule out vertebral fracture

**Tool Tip:** Clicking on the ‘height graph’ will show you the history of the patient’s height to help determine if there has been any change over time

### 3 Physical

**A. Assess balance and gait for fracture risk:**  
 Can patient rise from chair without using arms and walk several steps? [\(Get/Timed Up and Go Test\)](#)  Yes  No

**B. Screen for vertebral fracture:**

Current height  cm  
 Previous height  cm   
[Height Graph](#)

	Yes	No	If yes to any, order PA lateral spine x-ray to rule out vert. fracture
Prospective height loss > 2 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Historical height loss > 6 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rib-pelvis distance ≤ 2 fingers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Occiput-wall distance > 5 cm	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

11. **RULE OUT** secondary factors for osteoporosis

**Tool Tip:** Most recent lab values will be pre-populated if these have been done already. If labs are > than 1 year, consider repeating

12. If no information is available on this patient, order appropriate tests

**Tool Tip:** Click on ‘lab’ in blue to generate a requisition form of all recommended tests except SPEP – SPEP is recommended in the presence of vertebral compression fractures or when lumbar spine BMD is worse than femoral neck by at least one SD

### 4 Lab to rule out secondary osteoporosis

	Value	Target	Date of latest
Calcium	never	<input type="text"/>	mmm d. yyyy
Albumin	never	<input type="text"/>	mmm d. yyyy
Creatinine	never	<input type="text"/>	mmm d. yyyy
eGFR	30	<input type="text"/>	Aug 28, 2017
Alkaline phosphatase	never	<input type="text"/>	mmm d. yyyy
TSH	never	<input type="text"/>	mmm d. yyyy
Protein electrophoresis Only for patients with vertebral fracture	<input checked="" type="radio"/> Normal <input type="radio"/> Abnormal	<input type="text"/>	mmm d. yyyy
25-hydroxyvitamin D (25OHD) measured after 3-4 months of adequate supplementation and should not be repeated if an optimal level (75 nmol/L) is achieved.	never	<input type="text"/>	mmm d. yyyy
CBC (Hemoglobin)	never	<input type="text"/>	mmm d. yyyy

13. **ENTER** T-Scores to compare changes if previous results are available

**Tool Tip:** Enter t-score by clicking 'enter new vital'. Latest t-score will be shown the next time the form is inserted; however, you can still find the latest entry by clicking on 'view flowsheet' or scrolling down to see the note entered below custom form

14. Determine if a BMD test should be ordered based on assessed risk factors

**Tool Tip:** You can bring up a requisition form to your preferred location by clicking on "order DXA"

### 5 Bone Mineral Density (BMD)

Prior BMD test complete  Yes  No  
 BMD test ordered  Yes  No

Vital	Latest T-score	Date
Femoral neck	2.5	Apr 10, 2018
Lumbar spine	-3.0	Apr 10, 2018

**Options:**  
[Enter new vital](#)  
[View flowsheet](#)

If BMD test indicated, [order DXA](#). Assess fracture risk at next apt.

**Apr 10, 2018**  
**T-Score EA**  
 @Femoral\_Neck\_T-score: 2.5  
 @Lumbar\_Spine\_T-score: -3.0

15. **DETERMINE** current risk and compare to previous risk, if available, and use the graph to assess where patient is on the risk level curve

**Tool Tip:** A dot will be placed on the graph depending on the t-scores entered. The box will also have a yellow outline depending if the patient is female or male

### 6 10-year fracture risk: CAROC or FRAX

For treatment naïve patients ≥ 50 years

**Low: risk < 10%**  
Reassess risk in 3-5 years

**Moderate: risk 10-20%**  
Lateral x-ray (T4-L4) to rule out vertebral fracture  
**BMD in 1-3 years and reassess fracture risk**

**High: risk > 20%**  
**OR**  
Prior fragility fracture of hip/spine  
**OR** > One fragility fracture

**Previous Risk:**

**Current Risk:**

*Fragility fracture after 40 or recent prolonged use of systemic glucocorticoids (Min. 3 months cumulative use in past year at a prednisone equivalent dose of 7.5 mg daily) raises risk by one basal category*

16. **COUNSEL** patient regarding his/her risk or any change in risk from previous assessment, as well as exercise, falls prevention and nutrition

**Tool Tip:** Handouts can be generated by clicking the blue links. Emphasize changes in exercise recommendations that include strength training

17. For patients at moderate risk, determine other risk factors that may warrant consideration of treatment – consider ordering lateral thoracolumbar spine x-ray to rule out compression fracture to help stratify risk further

**7 Recommendations for Patient Care**  
 Encourage balance & strength training, aerobic physical activity, Calcium (diet+supplement) 1000-1200 mg daily, vitamin D3 800-2000IU daily. [Nutrition Handout](#)  
 Falls-prevention: handout given  Yes  No  
 Days per week patient exercises   
 Minutes per day patient exercises at this level   
[Too Fit to Fall or Fracture Handout](#)

Risk Level	Recommendation
<b>Low</b>	<b>Unlikely to benefit from pharmacotherapy</b>
<b>Moderate</b>	<b>Consider pharmacotherapy if patient has at least one of the following:</b>
	<b>Yes</b> <b>No</b>
	Vertebral fracture identified by X-ray <input type="checkbox"/> <input checked="" type="checkbox"/>
	Prior wrist fracture in patients ≥ 65 years <input checked="" type="checkbox"/> <input type="checkbox"/>
	T-score much worse than -2.5 at any site <input type="checkbox"/> <input checked="" type="checkbox"/>
	Lumbar T-score much worse than Femoral neck <input checked="" type="checkbox"/> <input type="checkbox"/>
	Rapid bone loss <input type="checkbox"/> <input type="checkbox"/>
	Men on androgen deprivation therapy <input type="checkbox"/> <input checked="" type="checkbox"/>
	Women on aromatase inhibitor therapy <input type="checkbox"/> <input checked="" type="checkbox"/>
	Long-term/repeat use of glucocorticoids <input checked="" type="checkbox"/> <input type="checkbox"/>
	Has fallen 2 or more times in past 12 months <input type="checkbox"/> <input checked="" type="checkbox"/>
	Secondary osteoporosis <input checked="" type="checkbox"/> <input type="checkbox"/>

18. **DETERMINE** if treatment will be needed for moderate vs high risk patients

**Tool Tip:** Consider 1st line therapy if new treatment, or consider if change in therapy to another agent is needed by clicking on “Pharmacotherapy with Evidence for Fracture Prevention”

19. **COUNSEL** patient around osteoporosis therapies, atypical fractures and/or ONJ

**Tool Tip:** Handouts can be generated by clicking on the blue links

**High Pharmacotherapy Indicated**  
**Pharmacotherapy with Evidence for Fracture Prevention**

<a href="#">Click to Prescribe</a>	Currently On	Initiated	Changed to
<a href="#">Alendronate (Fosamax)</a>	<input checked="" type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy
<a href="#">Alendronate + 5600IU Vit D (Fosavance)</a>	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input checked="" type="checkbox"/> mmm d. yy
<a href="#">Risedronate (Actonel)</a>	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy
<a href="#">Risedronate DR (Actonel D)</a>	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy
<a href="#">Denosumab (Prolia)</a>	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy
<a href="#">Zoledronic Acid (Aclasta)</a>	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy
<a href="#">PTH (Forteo)</a>	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy	<input type="checkbox"/> mmm d. yy

**Handouts:** [OP Treatments](#) [Osteonecrosis of the Jaw](#)  
[Atypical fx and Bisphosphonate:](#) [Prolia and Atypical fx](#)

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