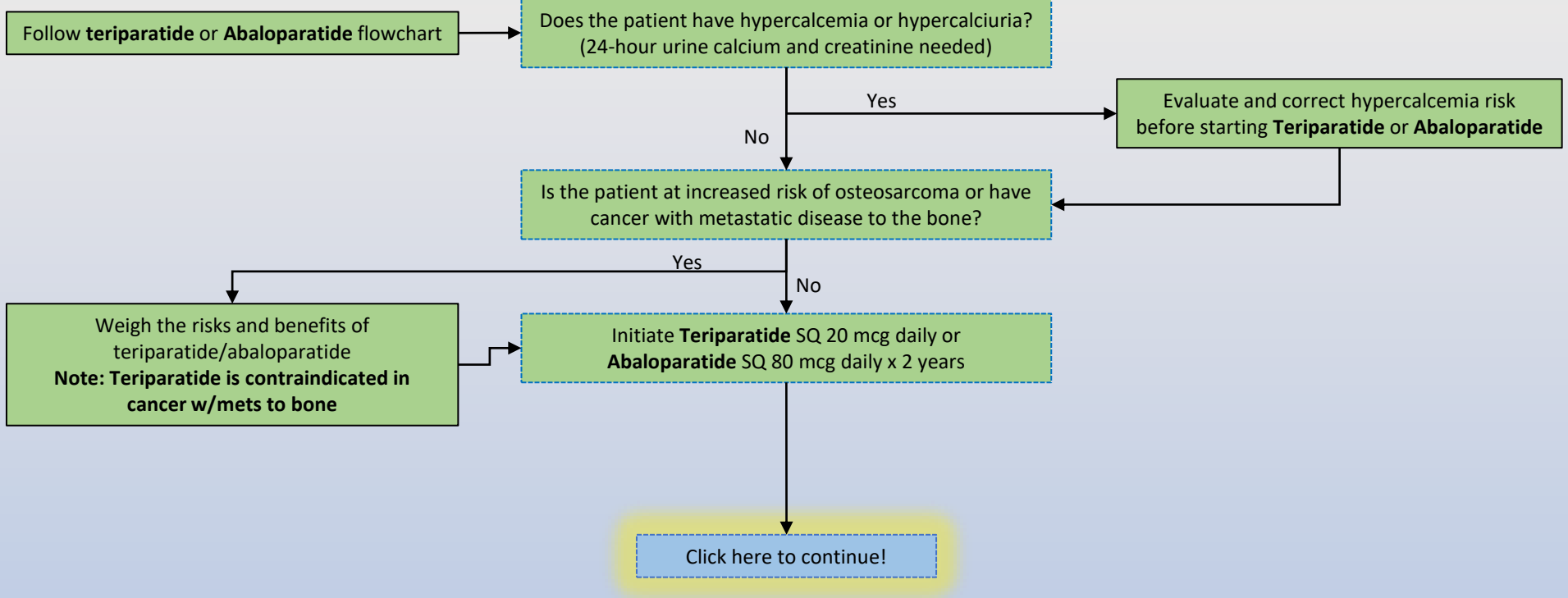
Initiation

Maintenance

Transition

Full Flowchart

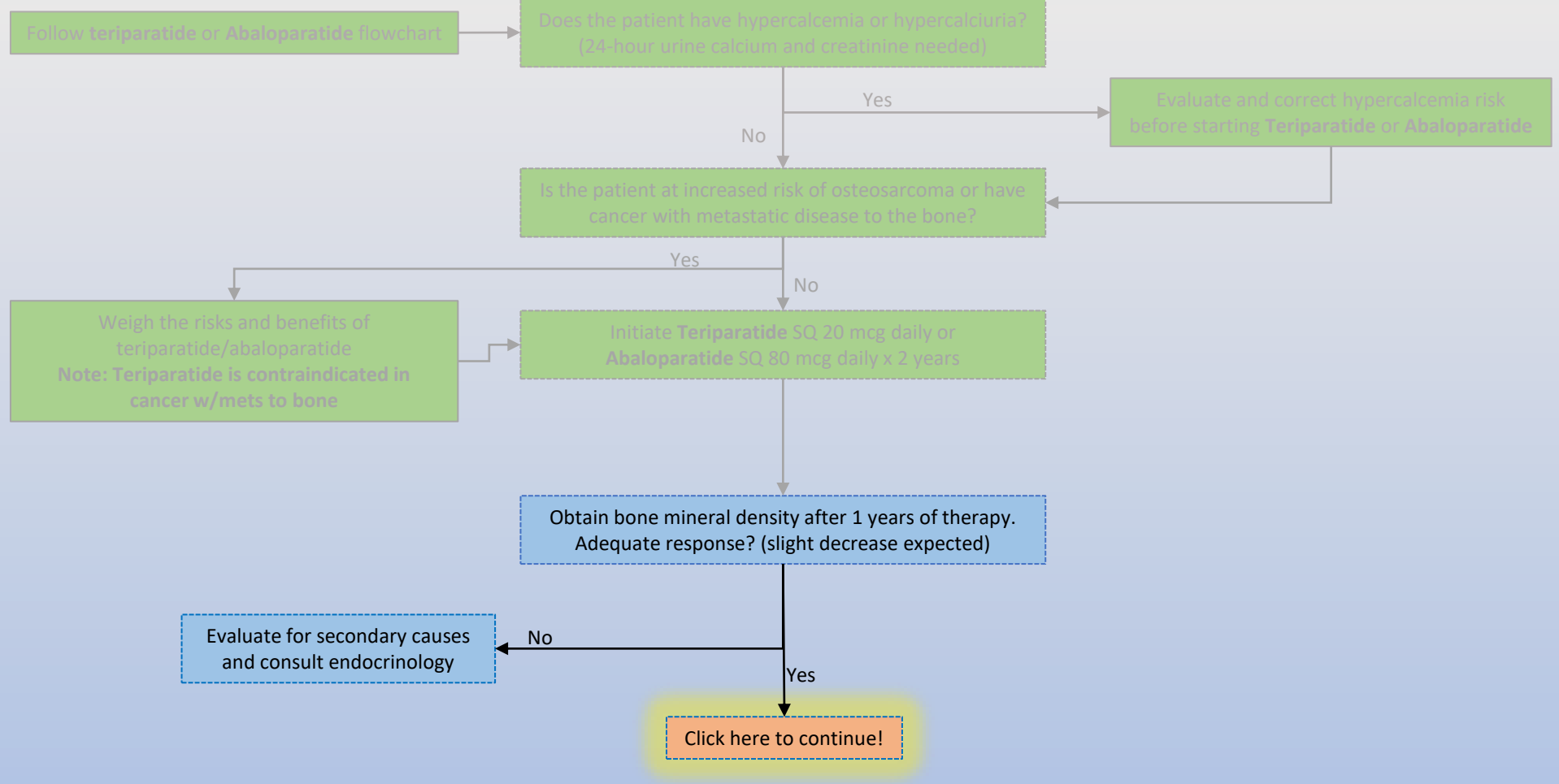


Initiation

Maintenance

Transition

Full Flowchart

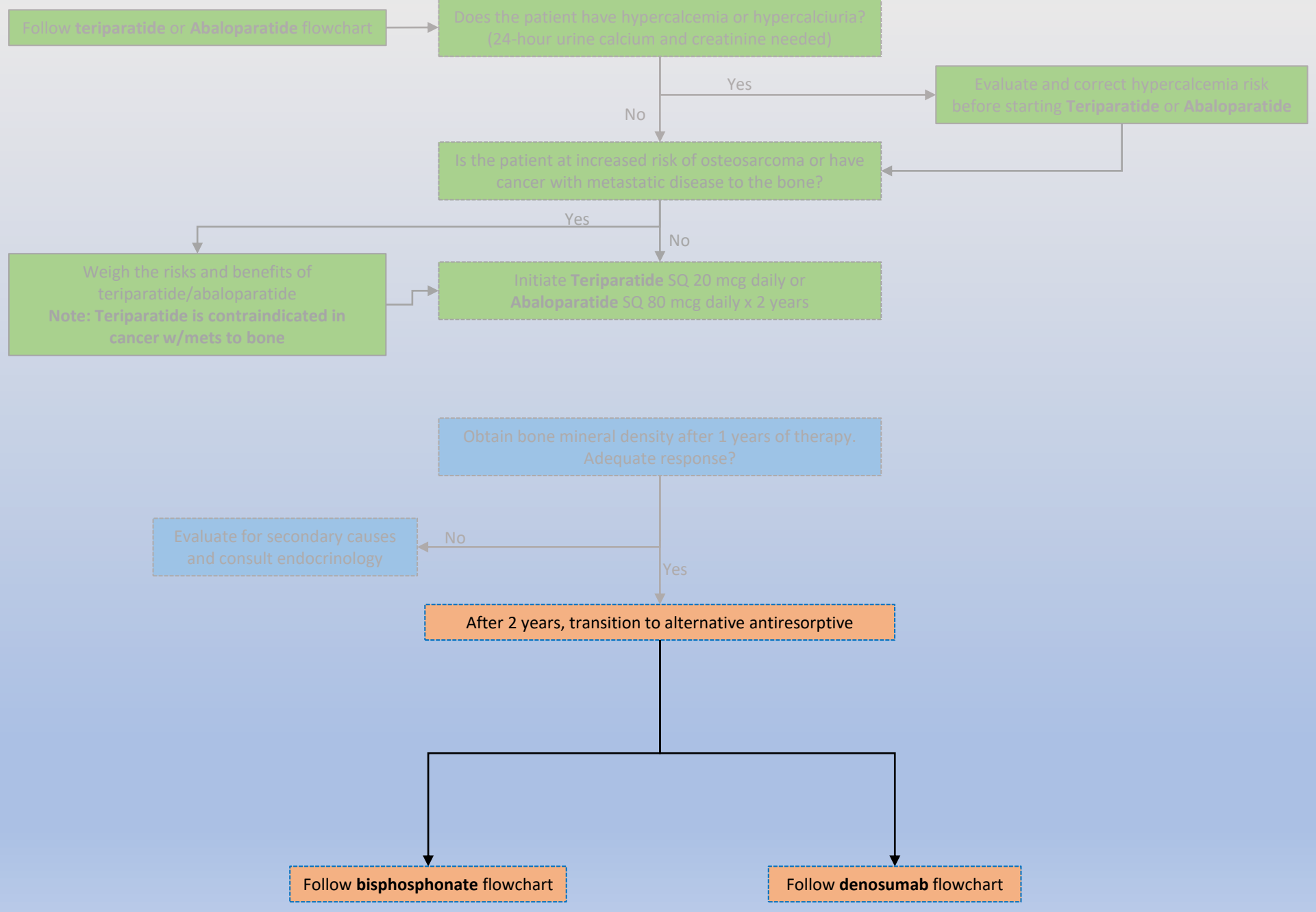


Initiation

Maintenance

Transition

Full Flowchart

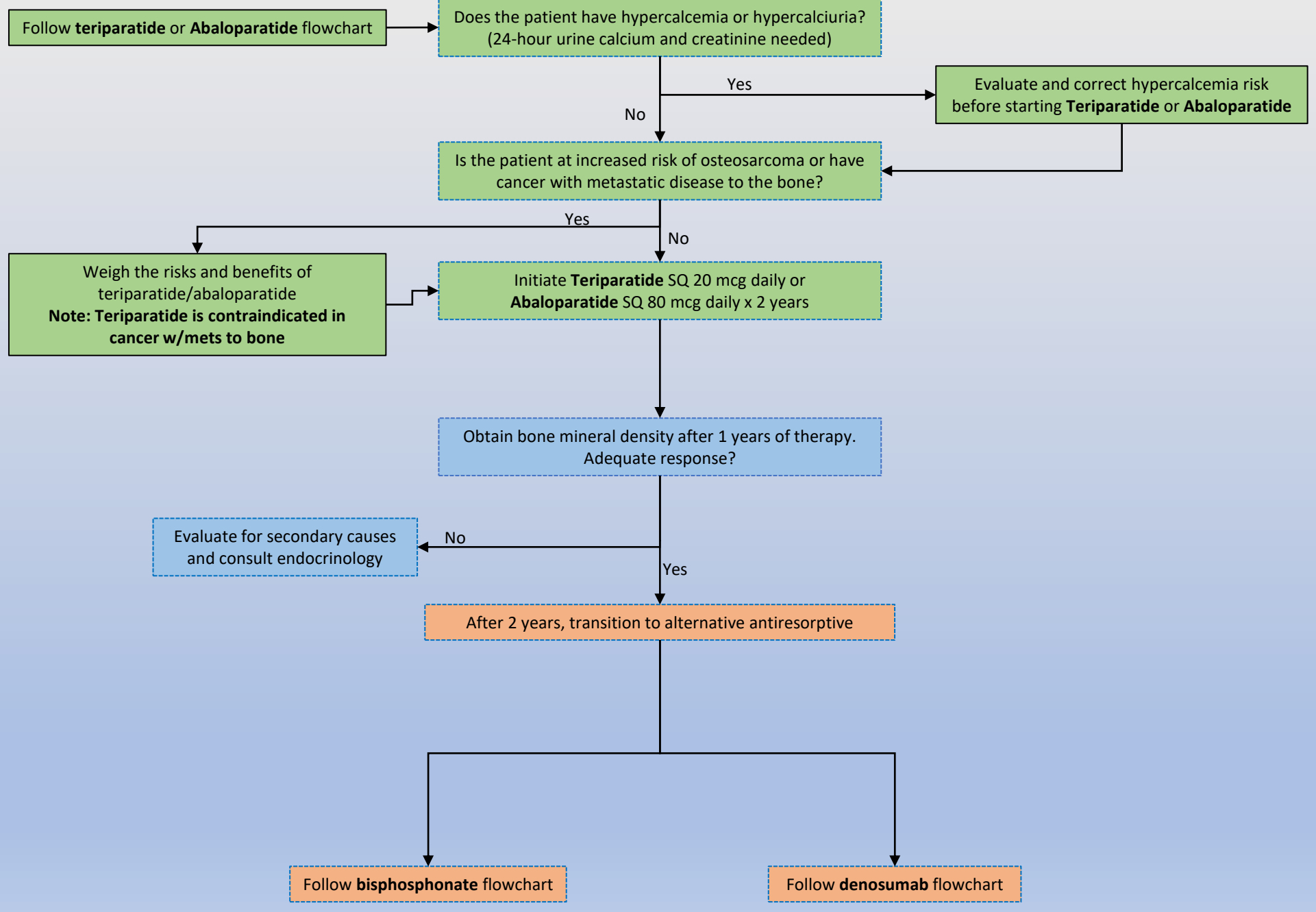


Initiation

Maintenance

Transition

Full Flowchart



PEARL: Teriparatide and abaloparatide INCREASE serum calcium which will worsen preexisting hypercalcemia and hypercalciuria

These medications act like parathyroid hormone which increases serum calcium through intestinal absorption and bone turnover

- **Teriparatide** is a PTH analog while **abaloparatide** is a PTH-related protein

As a result, they can cause hypercalcemia and hypercalciuria – particularly in patients who are predisposed.

- For example, patients with elevated serum or history of nephrolithiasis

Is the patient at increased risk of osteosarcoma?

Pearl: Teriparatide had and abaloparatide has a black box warning for risk of osteosarcoma due to an increase incidents in rats. So far, the rates of osteosarcoma have not been higher than expected in the general population.

Selected risk factors for osteosarcoma:

- ❑ Prior bone malignancy
  - **Note teriparatide is contraindicated in patients with cancer and known bone metastasis (including any ER+ breast cancer)**
- ❑ Paget's disease of the bone (suspect in elevated alkaline phosphatase)
- ❑ Pediatric and young adult patients with open epiphyses
- ❑ Patients with any prior external beam or implant radiation

Click for more information on risk of osteosarcoma with teriparatide or abaloparatide!

Initiate **Teriparatide** SQ 20 mcg daily or
Abaloparatide SQ 80 mcg daily x 2 years

Initiate **Teriparatide** SQ 20 mcg daily or **Abaloparatide** SQ 80 mcg daily x 2 years

Both can be self-administered into the thigh or abdominal wall

Implement monitoring:

- ❑ Orthostatic check after first dose
- ❑ Serum calcium after 2-3 months

Click for more information on starting teriparatide or abaloparatide!

Obtain bone mineral density after 1 years of therapy.
Adequate response?

Pearl: A slight decrease in T-score may occur at 1-year follow up BMD, but does not necessarily indicate inadequate treatment!

Our expert opinion is to check a BMD 1 year after starting therapy and again at the completion of therapy.

Click for more information on BMD after starting teriparatide/abaloparatide!

Evaluate for secondary causes and consult endocrinology

PEARL: If the BMD is worsening (outside the margin of the least significant change), this should prompt a reevaluation of teriparatide/abaloparatide therapy

- Consider evaluating/addressing for secondary causes of osteoporosis
- Consider medication nonadherence
- Consider romosozumab
- Strongly consider endocrinology consultation

Click for more information on reevaluating teriparatide/abaloparatide therapy!

Initiation

Maintenance

Transition

Full Flowchart

PEARL: After no more than two years of therapy, teriparatide/abaloparatide need to be following by another osteoporosis treatment to maintain gains!

Teriparatide/Abaloparatide are most often followed by bisphosphonates or denosumab.

Bisphosphonates

Oral:

- Alendronate 70 mg weekly (or 10 mg daily) x 5 years
- Risedronate 35 mg weekly or 150 mg monthly x 5 years

IV:

- Zoledronic acid 5 mg yearly x 3 years

Denosumab: 60 mg SQ every 6 months

Click for more information on completed teriparatide/abaloparatide therapy!

After 2 years, transition to alternative antiresorptive