Zoledronic Acid

Indication

Palliative therapy for, and prevention of, skeletal related events (pathological fracture, radiation to bone, spinal cord compression or surgery to bone) in adults with bone metastases from solid tumours.

Note the onset of treatment effect is usually 2-3 months.

ICD-10 codes

Codes with a prefix C80

Regimen details

Day	Drug	Dose	Route
1	Zoledronic acid	4mg*	IV infusion

* dose to be reduced in renal impairment (CrCl ≤60mL/min) – see renal impairment section.

Cycle frequency

21-28 days

Number of cycles

As required

Administration

Zoledronic acid is administered by IV infusion in 100mL 0.9% sodium chloride over 15 minutes.

Pre-medication

Ensure patients are well hydrated prior to treatment.

Emetogenicity

This regimen has low emetic potential

Additional supportive medication

Oral supplement of 500 mg calcium and 400 IU vitamin D daily.
Paracetamol for flu-like symptoms as required.
Antiemetics if required.

Extravasation

Zoledronic acid is not vesicant

Investigations – pre first cycle

ALL PATIENTS ARE RECOMMENDED TO HAVE A DENTAL ASSESSMENT PRIOR TO COMMENCING TREATMENT BECAUSE OF THE POTENTIAL RISK OF OSTEONECROSIS OF THE JAW. ANY DENTAL WORK SHOULD BE COMPLETED BEFORE STARTING DENOSUMAB

Investigation	**Validity period** (or as per local policy)
U+E (including creatinine)	7 days
Calcium	7 days
Phosphate	7 days
Magnesium	7 days

Investigations - pre subsequent cycles

Investigation	**Validity period** (or as per local policy)
U+E (including creatinine)	7 days
Calcium	7 days
Phosphate	7 days
Magnesium	Every 3 months

* treatment may go ahead without FBC

In addition 6 monthly dental assessment is recommended.

Standard limits for administration to go ahead

If blood results not within range, authorisation to administer **must** be given by prescriber/ consultant

Dose modifications

- **Renal impairment**

Creatinine clearance should be calculated prior to each dose. The dose should then be adjusted as per table below. If CrCl < 30mL/min Zoledronic acid is contra-indicated.

CrCl (mL/min)	Zoledronic Acid dose
>60	4mg
51-60	3.5mg
41-50	3.3mg
30-40	3.0mg
<30	Omit

- **Hepatic impairment**

Limited clinical data are available in patients with severe hepatic insufficiency, no specific recommendations can be given for this patient population.

- **Other toxicities**

Treatment should be deferred if the patient has hypocalcaemia (corrected calcium <2.2 mmol/l) or hypophosphatemia (phosphate <0.8 mmol/l).
If the patient has low magnesium this should be treated as per local policy.

Adverse effects - for full details consult product literature/ reference texts

- **Serious side effects**

Osteonecrosis of the jaw (dental assessment prior to treatment and withhold zoledronic acid for at least 3 weeks pre and post any dental intervention). If dental extractions are required the patient should be referred to a specialist dental hospital
Atrial fibrillation

- **Frequently occurring side effects**

Flu like symptoms
Pain flare
Bone pain, myalgia, arthralgia
Hypocalcaemia
Hypophosphataemia
Nausea

- **Other side effects**

Numbness around mouth (sign of low calcium)
Conjunctivits
Headache
Renal impairment
Anaemia

Significant drug interactions – for full details consult product literature/ reference texts

Thalidomide: Increased risk of renal impairment with concomitant thalidomide
Aminoglycosides: Increased risk of renal impairment

Additional comments

References

- Summary of Product Characteristics Zoledronic acid (Zometa) accessed 4 May 2017 via medicines.org.uk

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