Gemcitabine & docetaxel

Indication

Relapsed metastatic osteosarcoma
Selected metastatic soft tissue sarcomas (3rd line)/ uterine leiomyosarcoma
Relapsed Ewings (if other 2nd line is not suitable)

Regimen details

Day	Drug	Fluid	Route	Time
1	Gemcitabine 675mg/m^2	250ml 0.9% sodium chloride	IV	90 minutes
8	Gemcitabine 675mg/m^2	250ml 0.9% sodium chloride	IV	90 minutes
	Docetaxel 100mg/m^2	250ml 0.9% sodium chloride	IV	60 minutes

Cycle frequency

Every 3 weeks

Number of cycles

6

Administration

Note gemcitabine given over 90 minutes
Give gemcitabine before docetaxel on day 8

Pre-medication

Dexamethasone 8 mg bd for 3 days to start 24 hours pre docetaxel

Emetogenicity

Moderately emetogenic

Additional supportive medication

Filgrastim 5 micrograms/kg sc daily, starting day 9

Investigations – pre first cycle

Investigation	Validity period
FBC	14 days
U+E (including creatinine)	14 days
LFT (including AST)	14 days

Investigations –pre subsequent cycles

Day 1: FBC, U+E (including creatinine), LFT (including AST)

Day 8: FBC

Standard limits for administration to go ahead

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

Day 1:

Neutrophils > 1.5
Platelets > 100

Day 8:

Neutrophils		Platelets	Doses
≥ 1 x 10^9/L	And	≥ 100 x 10^9/L	Full doses
0.5-0.99 x 10^9/L	Or	50 – 99 x 10^9/L with no evidence of bleeding	Give 75% doses of both gemcitabine and docetaxel
< 0.5 x 10^9/L	Or	< 50 x 10^9/L	Omit (do not defer)

Dose modifications

See above

At any time:
If patient has febrile neutropenia or platelets < 25 x 10^9/l for more than 5 days, give 25% dose reduction of docetaxel and gemcitabine for all further cycles. If this problem re-occurs at the lower dose, the treatment should be discontinued

Other toxicities
If Grade 3 or 4 neurotoxicity, delay treatment for 1 week. If neurotoxicity resolves to ≤ Grade 2, treatment may be restarted, with docetaxel dose reduced to 75% of previous dose for all remaining cycles. If symptoms return, stop docetaxel
If Grade 3 or 4 cutaneous reactions, once patient recovered, reduce docetaxel dose to 75mg/m2. If symptoms return, stop docetaxel
Stop treatment in the event of severe dyspnoea, ARDS or haemolytic uraemic syndrome

Adverse effects –

for full details consult product literature/ reference texts

Gemcitabine:
Thrombocytopenia, raised liver transaminases (transient), rash, severe dyspnoea, ARDS, haemolytic uraemic syndrome

Docetaxel:
Hair loss, prolonged neutropenia, allergic reactions, diarrhoea, neuropathy

References

Fox E, Patel S, Wathen JK et al. Phase II study of sequential gemcitabine followed by docetaxel for recurrent Ewing sarcoma, osteosarcoma or unresectable or locally recurrent chondrosarcoma: results of Sarcoma Alliance for Research through Collaboration Study 003. Oncologist 2012; 17 (3): 321

THIS PROTOCOL HAS BEEN DIRECTED BY DR PARIKH, DESIGNATED LEAD CLINICIAN FOR SARCOMA

RESPONSIBILITY FOR THIS PROTOCOL LIES WITH THE HEAD OF SERVICE

Date: July 2020
Review: July 2022
VERSION: 3