Systemic Anti Cancer Treatment Protocol

Gemcitabine Docetaxel Sarcoma

PROTOCOL REF: MPHAGEMDOC
(Version No: 1.1)

This protocol has been temporarily amended - please see the SRG Guidelines during COVID-19 Sarcoma Cancer

Approved for use in:

Osteosarcoma – 3rd line

Ewing's family sarcoma – 2nd or 3rd line

Soft tissue sarcomas: leiomyosarcoma, uterine leiomyosarcoma – 2nd line

Bone sarcomas – 2nd or 3rd line

Desmoplastic small round cell tumour – 2nd line

Dosage:

Drug	Dosage	Route	Frequency
Gemcitabine*	675mg/m^2 days 1 and 8	IV	Every 21 days
Docetaxel**	**75mg/m^2 day 8	IV	Every 21 days

*Consider dose escalation to 900mg/m^2

**Docetaxel dose may be escalated to 100mg/m^2 if well tolerated

Supportive treatments:

Antiemetic risk: days 1 and 8 - low

Dexamethasone tablets 8mg twice daily for 3 days starting 24 hours before docetaxel

Domperidone 10mg oral tablets, up to 3 times a day as required

Consider filgrastim from day 10 of cycle for 5 to 7 days

Extravasation risk:

Gemcitabine: non vesicant

Docetaxel: Vesicant – refer to trust / network extravasation policy

Administration:

Day	Drug	Dosage	Route	Diluent and Rate
1	Dexamethasone 30 minutes before chemotherapy	8mg	PO	
1	**Gemcitabine**	**675mg/m^2**	**IV**	In 250ml 0.9% sodium chloride over 30 minutes
7	Dexamethasone	8mg	PO	Twice daily for 3 days starting 24 hours before docetaxel
8	**Gemcitabine**	**675mg/m^2**	**IV**	In 250ml 0.9% sodium chloride over 30 minutes
8	**Docetaxel**	**75mg/m^2**	**IV**	In 250ml 0.9% sodium chloride over 1 hour

Give for 6 cycles and review – may be continued for 8 cycles subject to tolerance, efficacy and patient preference

Notes:

Docetaxel

Ensure pre-med dexamethasone has been prescribed and taken before docetaxel.

If dexamethasone pre-meds have **not** been taken then **dexamethasone IV 16mg** may be administered prior to starting the docetaxel infusion[1]

Dexamethasone anti-emetics not needed as part of pre-med regimen

Hypersensitivity reactions to docetaxel normally occur within the first few minutes of the initiation of the infusion.

Facilities to treat anaphylaxis must be present when administering this regimen. If a patient experiences an **infusion-related reaction**, give future does with premedication cover of IV chlorphenamine 10mg and IV hydrocortisone 100mg.

Gemcitabine

Do not give concurrent radiotherapy with gemcitabine

Note: Beware of possible pulmonary symptoms of cough and breathlessness –see toxicity management.

Poor lung function prior to treatment is a relative contraindication

Main Toxicities:

Gemcitabine – Myelosuppression, anaemia, anorexia, breathlessness, oedema, rash, itchy skin, hair loss, fatigue.

Docetaxel - Myelosuppression, hypersensitivity and infusion related reactions, cutaneous reactions and nail changes, fluid retention, alopecia, peripheral neurotoxicity, stomatitis, diarrhoea, ovarian failure/infertility.

Investigations and treatment plan

	Pre	Cycle 1	Cycle 1d8	Cycle 2	Cycle 2d8	Cycle 3	Cycle 3d8	Comments/ ongoing
Medical Assessment	X			X			X	Every cycle
Nursing Assessment	X	X	X	X	X	X	X	Every cycle
FBC	X	X	X	X	X	X	X	Every cycle
U&E & LFT	X	X		X		X		Every day 1 of cycle
CT scan	X					X		As clinically indicated
Informed Consent	X							
Blood pressure measurement	X							Repeat if clinically indicated
PS recorded	X	X	X	X	X	X	X	Every cycle
Toxicities documented	X	X	X	X	X	X	X	Every cycle
Weight recorded	X	X	X	X	X	X	X	Every cycle

Biochemistry tests are only required on day 8 if day 1 were above upper limits of normal.

Dose Modifications and Toxicity Management:

Haematological toxicity

Proceed on day 1 and day 8 if:-

ANC ≥ 1.0 x 10^9/L	Platelets ≥ 75 x 10^9/L

Delay 1 week if:-

ANC ≤ 0.9 x 10^9/L	Platelets ≤ 74 x 10^9/L

If haematological recovery is delayed by more than 14 days, then reduce both gemcitabine and docetaxel by 20%.

If further delays then a second dose reduction of 20% should be applied.

Non-Haematological toxicity

<table>
<tr><td>Renal</td><td>No dose adjustments needed for docetaxel
If CrCl < 30mL/min consider Gemcitabine dose reduction – discuss with consultant</td></tr>
<tr><td>Hepatic</td><td>
<table>
<tr><th>Hepatic parameter</th><th>Docetaxel dose</th></tr>
<tr><td>ALT and/or AST > 1.5 x ULN and ALP > 2.5 x ULN</td><td>75mg/m^2</td></tr>
<tr><td>Bilirubin > ULN and/or ALT/AST > 3.5 x ULN with ALP > 6 x ULN</td><td>Use docetaxel only if no alternative – discuss with consultant</td></tr>
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</td></tr>
<tr><td>Gastro intestinal</td><td>Diarrhoea and Mucositis
<table>
<tr><th>Grade</th><th>Action</th></tr>
<tr><td>Grade 2</td><td>Omit until resolved then 100% dose</td></tr>
<tr><td>Grade 3</td><td>Omit until resolved and restart at 80% dose</td></tr>
<tr><td>Grade 4</td><td>Omit until resolved and restart at 50% dose – discuss with consultant</td></tr>
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<tr><td>Pulmonary</td><td>Pulmonary symptoms of cough and breathlessness with chest X-ray evidence of infiltration have been noted with this combination. Acute admission and supportive care needed. Consider lung function tests. Severe impairment may require discontinuation of treatment but if symptoms improve consider proceeding.</td></tr>
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References:

Fox E, Patel S, Wathen JK, Schuetze S, Chawla S, Harmon D, 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. The oncologist. 2012;17(3):321-e9.

Mora J, Cruz CO, Parareda A, de Torres C. Treatment of relapsed/refractory pediatric sarcomas with Gemcitabine +/- docetaxel. Journal of pediatric hematology/oncology. 2009;31(10):723-9.

[1]E.S. Rogers et al, Efficacy and safety of a single dose of dexamethasone pre docetaxel treatment: The Auckland experience Annals of Oncology (2014) 25 (suppl_4): iv517-iv541. 10.1093/annonc/mdu356

rEECur trial protocol Version 3.0, 9th September 2014

Thames Valley Cancer Network http://tvscn.nhs.uk/networks/cancer/cancer-topics/sarcoma/