

## **Chemotherapy Protocol**

## **BREAST CANCER**

## CYCLOPHOSPHAMIDE-DOCETAXEL-EPIRUBICIN (100)- FLUOROURACIL-PERTUZUMAB-TRASTUZUMAB

(FE<sub>100</sub>CT-HP)

## Regimen

• Breast Cancer – Cyclophosphamide-Docetaxel-Epirubicin (100)-Fluorouracil-Pertuzumab-Trastuzumab (FE<sub>100</sub>CT-HP)

### Indication

- Neo-adjuvant / adjuvant therapy of breast cancer
- WHO Performance status 0, 1, 2

## **Toxicity**

Drug	Adverse Effect
Cyclophosphamide	Dysuria, haemorrhagic cystitis, taste disturbances
Docetaxel	Hypersensitivity, fluid retention, neuropathy, joint pains, nail changes, fatigue
Epirubicin	Cardio-toxicity, urinary discolouration (red)
Fluorouracil	Diarrhoea, stomatitis
Pertuzumab	Diarrhoea, hypersensitivity reactions, headache, reduced appetite, dyspnoea, cough, vomiting, nausea, constipation, rash, pain, oedema, fatigue, asthenia, cardiotoxicity
Trastuzumab	Cardio toxicity, acute respiratory distress syndrome, infusion related effects

The adverse effects listed are not exhaustive. Please refer to the relevant Summary of Product Characteristics for full details.

The diarrhoea can be severe in patients treated with pertuzumab. It is important to ensure patients are given appropriate therapy for the treatment of diarrhoea. This is not included in the regimen on Aria and must be added from the support folder.

## Monitoring

## Regimen

- FBC, U&E's and LFT's prior to cycles 1 to 8 inclusive. During the administration of trastuzumab with pertuzumab alone this may be reduced to every three months.
- Ensure adequate cardiac function before and at regular intervals during treatment. Baseline LVEF should be measured, particularly in patients with a



history of cardiac problems or in the elderly. An echocardiogram should be conducted before cycle four and then three monthly thereafter.

- HER2 status before initiating therapy
- Patients with complete or partial dihydropyrimidine dehydrogenase (DPD)
  deficiency are at increased risk of severe and fatal toxicity during treatment
  with fluorouracil. All patients should be tested for DPD deficiency before
  initiation (cycle 1) to minimise the risk of these reactions

### **Dose Modifications**

The dose modifications listed are for haematological, liver and renal function only. Dose adjustments may be necessary for other toxicities as well.

In principle all dose reductions due to adverse drug reactions should not be reescalated in subsequent cycles without consultant approval. It is also a general rule for chemotherapy that if a third dose reduction is necessary treatment should be stopped. The following guidelines apply to chemotherapy only.

Please discuss all dose reductions / delays with the relevant consultant before prescribing if appropriate. The approach may be different depending on the clinical circumstances. The following is a general guide only.

## Haematological

Prior to prescribing the following treatment criteria must be met on day 1 of treatment.

Criteria	Eligible Level			
Neutrophils	equal to or more than 1x109/L			
Platelets	equal to or more than 100x109/L			

Consider blood transfusion if patient symptomatic of anaemia or has a haemoglobin of less than 8g/dL (80g/l)

In the adjuvant / neo-adjuvant setting always check with the relevant consultant before delaying or reducing the dose in response to a toxicity.

For the FEC arm of treatment consider delaying treatment for 7 days to allow the platelets and neutrophils to be 100x10<sup>9</sup>/L and 1x10<sup>9</sup>/L or above respectively. Always check with the relevant consultant before prescribing a dose reduction or delay.

For docetaxel the following table applies.



		Previous Docetaxel Dose			
Toxicity	Grade (NCI-CTC)	100mg/m <sup>2</sup>	75mg/m²	60mg/m²	
	1	100mg/m <sup>2</sup>	75mg/m <sup>2</sup>	60mg/m <sup>2</sup>	
	2	Delay until grade 1 then 100mg/m <sup>2</sup>	Delay until grade 1 then 75mg/m²	Delay until grade 1 then 60mg/m <sup>2</sup>	
Neutropenia	3	Delay until grade 1 then 100mg/m²	Delay until grade 1 then 75mg/m <sup>2</sup>	Delay until grade 1 then 60mg/m <sup>2</sup>	
	4	Delay until grade 1 then 75mg/m²	Delay until grade 1 then 60mg/m <sup>2</sup>	Stop	
Febrile	3	Delay until grade 1 then 75mg/m²	Delay until grade 1 then 60mg/m <sup>2</sup>	Stop	
	4	Delay until grade 1 then 75mg/m <sup>2</sup>	Delay until grade 1 then 60mg/m <sup>2</sup>	Stop	
	Greater than or equal to 100x10 <sup>9</sup> /L	100mg/m <sup>2</sup>	75mg/m²	60mg/m <sup>2</sup>	
Platelets	Less than 100x10 <sup>9</sup> /L	Delay until greater than or equal to 100x10 <sup>9</sup> /L then 75mg/m <sup>2</sup>	Delay until greater than or equal to 100x10 <sup>9</sup> /L then 60mg/m <sup>2</sup>	Stop	

No dose modifications for haematological toxicity are necessary for pertuzumab or trastuzumab. If treatment is not tolerated it should be stopped.

# Kidney Impairment

Drug	Creatinine Clearance (ml/min)	Dose (% of original dose)			
	more than 20	100			
Cyclophosphamide	10-20	75			
	Less than 10	50			
Docetaxel	No dose adjustment necessary				
Epirubicin	Dose reduce in severe impairment only				
Fluorouracil	Consider dose reduction in severe renal impairment only				
Pertuzumab	The safety and efficacy of pertuzumab has not been established in renal impairment				
Trastuzumab	No dose adjustment necessary				



# Liver Impairment

Drug	Recommendation			
Cyclophosphamide	Dose reduction may not be necessary			
	Bilirubin (umol/L) Dose (% of original)			
Epirubicin	24-51	50		
	52-85	25		
	85 or greater	Contra-indicated		
	If the AST 2-4xULN give 50% of the dose, then if then			
	AST is greater than 4xULN then give 25% dose			

Drug	Bilirubin (µmol/L)		AST/ALT (units)		Alk Phos (units)	Dose (% of original dose)
Docetaxel	N/A		1.5xULN or greater	and	2.5xULN or greater	Give 75%
	Greater than ULN	and/or	3.5xULN or greater	and	6xULN or greater	Not Recommended

Drug	Bilirubin µmol/L		AST/ALT units	Dose (%of original dose)	
	Less than 85		Less than 180	100%	
	More than 85	or	More than 180	CI	
Fluorouracil	In moderate hepatic impairment reduce the initial dose by one				
	third. In severe hepatic impairment reduce initial dose by one				
	half. These do	half. These doses may be increased if no toxicity occurs			

Drug	Recommendation
Pertuzumab	The safety and efficacy of pertuzumab has not been established in hepatic impairment
Trastuzumab	No dose adjustment necessary

## Other

Dose reductions or interruptions in therapy are not necessary for those toxicities that are considered unlikely to be serious or life threatening. For example, alopecia, altered taste or nail changes.

#### Docetaxel

Peripheral neuropathy at NCI-CTC grade 3 should result in a dose reduction from 100mg/m² to 75mg/m² or 75mg/m² to 60mg/m² depending on the dose given in the previous cycle. If the NCI-CTC grade 3 neuropathy occurred at doses lower than 100mg/m² or a NCI-CTC grade 4 toxicity develops CONSIDER stopping treatment.



Excessive tearing / lacrimation are related to cumulative docetaxel doses and occur after a median of 400mg/m². Symptomatic treatment with hypromellose 0.3% eye drops four times a day may help. However, if the ocular irritation continues reduce the docetaxel dose to 80% of the original dose in the first instance.

Delay the docetaxel where a NCI-CTC grade 3 cutaneous toxicity is present on day one of the cycle until it resolves to NCI-CTC grade 1 or below. The subsequent doses of docetaxel should be reduced to from 100mg/m² to 75mg/m² or from 75mg/m² to 60mg/m². If it occurs with a dose of 60mg/m² or if there is no recovery after two weeks, docetaxel treatment should be stopped. Where a NCI-CTC grade 3 cutaneous toxicity occurs between cycles with recovery by day one then reduce the docetaxel dose as described. Docetaxel should be stopped in response to a NCI-CTC grade 4 cutaneous toxicity.

#### **Epirubicin**

Discontinue epirubicin if cardiac failure develops.

## Pertuzumab

The diarrhoea can be severe in patients treated with pertuzumab. It is important to ensure patients are given appropriate therapy for the treatment of diarrhoea. This is not included in the regimen on Aria and must be added from the support folder.

Pertuzumab and Trastuzumab

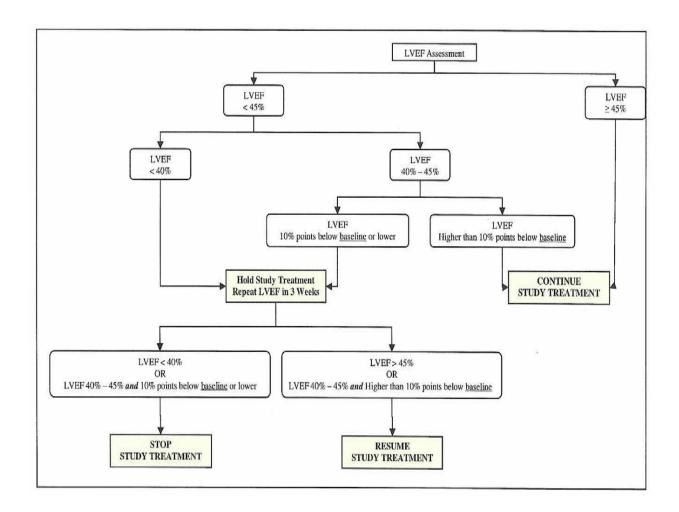
#### Cardiac

The LVEF should be fifty or above before starting cycle one of pertuzumab and trastuzumab.

## Subsequent Echocardiograms

The flow chart below describes the process to be followed if there is an **asymptomatic** decline in LVEF during pertuzumab and trastuzumab treatment. This is taken from the study protocol as used in the reference section. Study treatment refers to pertuzumab and trastuzumab.





In general patients who develop **symptomatic** cardiac dysfunction should have pertuzumab and trastuzumab discontinued, be commenced on ACE inhibitor therapy and be referred to a cardiologist. Further treatment should be discussed with the relevant oncology consultant.



## Regimen

The complete course of  $FE_{100}C$  is always administered first and is followed by docetaxel, pertuzumab and trastuzumab.

FE<sub>100</sub>C 21 day cycle for cycles 1, 2, 3

Drug	Dose	Days	Administration
Cyclophosphamide	500mg/m <sup>2</sup>	1	Intravenous bolus
Epirubicin	100mg/m²	1	Intravenous bolus
Fluorouracil	500mg/m²	1	Intravenous bolus

Followed by;

# Cycle 4

Drug	Dose	Days	Administration
Docetaxel	75mg/m <sup>2</sup>	1	Intravenous infusion in 250ml sodium
Dooctaxci	7 5111g/111	•	chloride 0.9% over 60 minutes
Doutur	0.40	4	Intravenous infusion in 250ml sodium
Pertuzumab	840mg	Į Į	chloride 0.9% over 60 minutes
Tractuzumah	Oma/ka	1	Intravenous infusion in 250ml sodium
Trastuzumab	8mg/kg	I	chloride 0.9% over 90 minutes

Followed by;

# Cycle 5, 6, 7

Drug	Dose	Days	Administration
Docetaxel	75mg/m <sup>2*</sup>	1	Intravenous infusion in 250ml sodium
2000taxo.	7 01119/111	•	chloride 0.9% over 60 minutes
Dowty	400	4	Intravenous infusion in 250ml sodium
Pertuzumab	420mg	l	chloride 0.9% over 30 minutes
Trootuzumoh	6ma/ka	1	Intravenous infusion in 250ml sodium
Trastuzumab	6mg/kg	Į Į	chloride 0.9% over 30 minutes

<sup>\*</sup>The dose of docetaxel can be increased to  $100 \text{mg/m}^2$  if the patient tolerates  $75 \text{mg/m}^2$ 

# Cycles 8-21 inclusive

Drug	Dose	Days	Administration
Pertuzumab	420mg	1	Intravenous infusion in 250ml sodium chloride 0.9% over 30 minutes
Trastuzumab	6mg/kg	1	Intravenous infusion in 250ml sodium chloride 0.9% over 30 minutes



## **Dose Information**

- Cyclophosphamide will be dose banded in accordance with the national dose bands (20PM).
- Docetaxel will be dose banded in accordance with the national dose bands(20mg/ml).
- The dose of docetaxel may be increased to 100mg/m<sup>2</sup> from cycle five onwards if well tolerated.
- Docetaxel induced fluid retention can lead to weight gain. This is not a reason to alter the doses
- Epirubicin will be dose banded in accordance with the national dose bands (2PM).
- The maximum lifetime cumulative dose of epirubicin is 900mg/m².
- Fluorouracil will be dose banded in accordance with the national dose bands (25PM).
- If the time between two sequential infusions of pertuzumab is less than six weeks, the 420mg dose should be administered as soon as possible without regard to the next planned dose. If the time between two sequential infusions is 6 weeks or more, the initial loading dose of 840mg should be readministered as a 60 minute intravenous infusion followed every 3 weeks thereafter by a maintenance dose of 420 mg administered over a period of 30 to 60 minutes.
- Trastuzumab will be dose banded in accordance with national dose bands (21mg/ml)
- If the patient misses a dose of trastuzumab by fourteen days or less, then the
  usual maintenance dose of 6mg/kg should be given as soon as possible. Do
  not wait until the next planned cycle. Subsequent maintenance doses should
  be given according to the previous schedule
- If the patient misses a dose of trastuzumab by more than fourteen days, a reloading dose of 8mg/kg should be given over 90 minutes. Subsequent maintenance doses should then be given every 21 days from that point

## Administration Information

- Hypersensitivity reactions tend to occur with the first or second infusion of docetaxel. Docetaxel infusion should not be interrupted for minor symptoms such as flushing or localised rashes. Immediately discontinue the infusion for severe reactions which include profound hypotension, bronchospasm and generalised erythema.
- Docetaxel doses of more than 200mg should be diluted in 500ml sodium chloride 0.9% (maximum concentration 0.74mg/ml)



- Pertuzumab has been associated with hypersensitivity and infusion related reactions. Patients should be observed for 60 minutes after the first infusion and for 30 – 60 minutes after subsequent infusions. If patients have tolerated the first two infusions with no infusion related reactions consideration can be given to reducing this observation period.
- Trastuzumab is associated with hypersensitivity reactions. The SPC
  recommends patients should be observed for six hours following the start of
  the first infusion of trastuzumab and for two hours following the start of
  subsequent infusions. In practice these times have been reduced. If the
  patient has tolerated the first two infusions with no infusion related effects
  consideration can be given to reducing or stopping this observation period.

#### Extravasation

- Cyclophosphamide neutral
- Docetaxel exfoliant
- Epirubicin vesicant
- Fluorouracil inflammitant
- Pertuzumab neutral
- Trastuzumab neutral

## **Additional Therapy**

FE<sub>100</sub>C antiemetics day 1

15-30 minutes prior to chemotherapy;

- dexamethasone 8mg oral or intravenous
- ondansetron 8mg oral or intravenous

#### As take home medication

- dexamethasone 4mg twice a day for 3 days oral
- metoclopramide 10mg three times a day when required oral
- ondansetron 8mg twice a day for 3 days oral

Growth factor according to local formulary choice. For example;

- filgrastim or bioequivalent 30 million units once a day subcutaneous for five days starting on day five of the cycle
- lenograstim or bioequivalent 33.6 million units once a day subcutaneous for five days starting on day five of the cycle
- pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day two of the cycle



#### **Docetaxel**

15-30 minutes before chemotherapy

- metoclopramide 10mg oral or intravenous

As take home medication

- metoclopramide 10mg three times a day when required oral
- To prevent fluid retention and hypersensitivity reactions prescribe
  dexamethasone 8mg twice a day oral for three days starting 24 hours before
  docetaxel administration. On the occasions where individuals attend for
  treatment and have forgotten to take the dexamethasone pre-medication
  administer dexamethasone 20mg as a once only dose intravenous bolus. The
  patient should be counselled to take the dexamethsone 8mg twice a day the
  following day.
- Growth factor according to local formulary choice. For example;
  - filgrastim or bioequivalent 30 million units once a day subcutaneous for seven days starting on day three of the cycle
  - lenograstim or bioequivalent 33.6 million units once a day subcutaneous for seven days starting on day three of the cycle
  - pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day two of the cycle
- For treatment of pertuzumab or trastuzumab infusion reactions 'once only when required' doses of the following should be prescribed;
  - chlorphenamine 10mg intravenous
  - hydrocortisone 100mg intravenous
  - paracetamol 1000mg once oral
- Mouthwashes according to local or national policy on the treatment of mucositis
- Gastric protection with a proton pump inhibitor or a H<sub>2</sub> antagonist may be considered in patients considered at high risk of GI ulceration or bleed.

#### References

1.von Minckwitz G, Proctor M, de Azambuja et al. Adjuvant pertuzumab and trastuzumab in early HER 2 positive breast cancer. N Engl J Med 2017; 377 (2): 122-131.

2. Ramshorst M, van der Voot A, van Werkhoven E et al. Neoadjuvant chemotherapy with or without anthracyclines in the presence of dual HER2 blockade for HER2-positive breast cancer (TRAIN-2): a multicentre, open-label, randomised, phase 3 trial. Lancet Oncology 2018: 19 (12); 1630-1640



#### **REGIMEN SUMMARY**

## Cyclophosphamide-Docetaxel-Epirubicin (100)-Fluorouracil-Pertuzumab-Trastuzumab (FE<sub>100</sub>CT-HP)

## FE100C

## Cycle 1, 2 Day 1

- 1. Dexamethasone 8mg oral or intravenous
- 2. Ondansetron 8mg oral or intravenous
- 3. Epirubicin 100mg/m² intravenous bolus over 10 minutes
- 4. Fluorouracil 500mg/m² intravenous bolus over 10 minutes
- 5. Cyclophosphamide 500mg/m² intravenous bolus over 10 minutes

## **Take Home Medicines**

Dexamethasone 4mg twice a day for 3 days oral starting on day two of the cycle Administration Instructions

Take 4mg twice a day (morning and lunch) for 3 days starting on day two of the cycle

7. Metoclopramide 10mg three times a day when required oral

Administration Instructions

When required for nausea. Please supply five days or an original pack if appropriate.

Ondansetron 8mg twice a day for 3 days oral starting on the evening of day one of the cycle

Administration Instructions

Take 8mg twice a day for three days starting on the evening of day one of the cycle

9. Growth factor according to local formulary choice.

Administration Instructions

Dispense according to local formulary choices;

- filgrastim or bioequivalent 30 million units once a day subcutaneous for 5 days starting on day 5 of the cycle
- lenograstim or bioequivalent 33.6million units once a day subcutaneous for 5 days starting on day 5 of the cycle
- pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day 2 of the cycle

## FE<sub>100</sub>C

## Cycle 3 Day 1

- 10. Dexamethasone 8mg oral or intravenous
- 11. Ondansetron 8mg oral or intravenous
- 12. Epirubicin 100mg/m² intravenous bolus over 10 minutes
- 13. Fluorouracil 500mg/m² intravenous bolus over 10 minutes
- 14. Cyclophosphamide 500mg/m² intravenous bolus over 10 minutes



#### **Take Home Medicines**

 Dexamethasone 4mg twice a day for 3 days oral starting on day two of the cycle Administration Instructions

Take 4mg twice a day (morning and lunch) for 3 days starting on day two of the cycle

## 15. Metoclopramide 10mg three times a day when required oral

Administration Instructions

When required for nausea. Please supply five days or an original pack if appropriate

## Ondansetron 8mg twice a day for 3 days oral starting on the evening of day one of treatment

Administration Instructions

Take 8mg twice a day for three days starting on the evening of day one of the cycle

# 17. Growth factor according to local formulary choice.

Administration Instructions

Dispense according to local formulary choices;

- filgrastim or bioequivalent 30million units once a day subcutaneous for 5 days starting on day 5 of the cycle
- lenograstim or bioequivalent 33.6million units once a day subcutaneous for 5 days starting on day 5 of the cycle
- pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day 2 of the cycle

# 18. Dexamethasone 8mg twice a day oral for three days starting the day before the docetaxel infusion

Administration Instructions

This is the supply for the next cycle. Take in the morning and at lunchtime

### **Docetaxel-Pertuzumab-Trastuzumab**

## Cycle 4 Day Minus 1

19. Dexamethasone 8mg twice a day oral\*

# Cycle 4 Day 1

## Pertuzumab 840mg intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

### 21. Administration Instructions

The first infusion of pertuzumab should be given over 60 minutes. If this is well tolerated subsequent infusions may be given over 30 minutes

# 22. Trastuzumab 8mg/kg intravenous infusion in 250ml sodium chloride 0.9% over 90 minutes

Administration Instructions

The first infusion of trastuzumab must be administered over 90 minutes. If this is well tolerated administer subsequent infusions over 30 minutes

## 23. Metoclopramide 10mg oral or intravenous

# 24. Dexamethasone 8mg twice a day oral (from TTO)\*

Administration Instructions

Ensure the patient has taken the dexamethasone pre-medication the day before and the day of docetaxel administration (and the day after). On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg (or equivalent dose) IV stat 15-30 minutes before chemotherapy. If the patient has already taken a dose of dexamethasone do not administer this dose



25. Docetaxel 75mg/m² intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

Administration Instructions

Ensure the patient has taken the dexamethasone pre-medication the day before and the day of docetaxel administration (and the day after). On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg (or equivalent dose) IV stat 15-30 minutes before chemotherapy.

- 26. Chlorphenamine 10mg intravenous when required for infusion related reactions
- 27. Hydrocortisone 100mg intravenous when required for infusion related reactions
- 28. Paracetamol 1000mg oral when required for infusion related reactions

Administration Instructions

Please check if the patient has taken paracetamol. Maximum dose is 4g per 24 hours. There should be 4 hours between doses

#### **Take Home Medicines**

29. Dexamethasone 8mg twice daily oral for 3 days starting the day before the docetaxel infusion

Administration Instructions

This is the supply for the next cycle. Take in the morning and at lunchtime

30. Metoclopramide 10mg three times a day oral when required

Administration Instructions

When required for nausea. Please supply five days or an original pack if appropriate.

31. Growth factor according to local formulary choice.

Administration Instructions

Dispense according to local formulary choices;

-filgrastim or bioequivalent 30 million units once a day subcutaneous for 7 days starting on day 3 of the cycle -lenograstim or bioequivalent 33.6 million units once a day subcutaneous for 7 days starting on day 3 of the cycle

-pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day 2 of the cycle

## Cycle 5, 6 Day Minus 1

32. Dexamethasone 8mg twice a day oral\*

## Cycle 5, 6 Day 1

 Pertuzumab 420mg intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

Administration Instructions

The first infusion of pertuzumab should be given over 60 minutes. If this is well tolerated subsequent infusions may be given over 30 minutes

34. Trastuzumab 6mg/kg intravenous infusion in 250ml sodium chloride 0.9% over 90 minutes

Administration Instructions

The first infusion of trastuzumab must be administered over 90 minutes. If this is well tolerated administer subsequent infusions over 30 minutes

35. Metoclopramide 10mg oral or intravenous



## 36. Dexamethasone 8mg twice a day oral (from TTO)\*

Administration Instructions

Ensure the patient has taken the dexamethasone pre-medication the day before and the day of docetaxel administration (and the day after). On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg (or equivalent dose) IV stat 15-30 minutes before chemotherapy. If the patient has already taken a dose of dexamethasone do not administer this dose

## 37. Warning - Check Docetaxel Dose

Administration Instructions

The dose of docetaxel may be increased to 100mg/m² in those individuals who tolerate the 75mg/m² dose with no issues. The dose in ARIA is set at 75mg/m²

# 38. Docetaxel 75mg/m² intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

Administration Instructions

Ensure the patient has taken the dexamethasone pre-medication the day before and the day of docetaxel administration (and the day after). On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg (or equivalent dose) IV stat 15-30 minutes before chemotherapy.

- 39. Chlorphenamine 10mg intravenous when required for infusion related reactions
- 40. Hydrocortisone 100mg intravenous when required for infusion related reactions

## 41. Paracetamol 1000mg oral when required for infusion related reactions

Administration Instructions

Please check if the patient has taken paracetamol. Maximum dose is 4g per 24 hours. There should be 4 hours between doses

## **Take Home Medicines**

## 42. Metoclopramide 10mg three times a day oral when required

Administration Instructions

When required for nausea. Please supply five days or an original pack if appropriate

# 43. Dexamethasone 8mg twice a day oral for 3 days starting the day before the docetaxel infusion.

Administration Instructions

This is the supply for the next cycle. Take in the morning and at lunchtime

#### 44. Growth factor according to local formulary choice.

Administration Instructions

Dispense according to local formulary choices;

- filgrastim or bioequivalent 30 million units once a day subcutaneous for 7 days starting on day 3 of the cycle
- lenograstim or bioequivalent 33.6 million units once a day subcutaneous for 7 days starting on day 3 of the cycle
- pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day 2 of the cycle

## Cycle 7 Day Minus 1

## 45. Dexamethasone 8mg twice a day oral\*

## Cycle 7 Day 1

# 46. Pertuzumab 420mg intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

Administration Instructions

The first infusion of pertuzumab should be given over 60 minutes. If this is well tolerated subsequent infusions may be given over 30 minutes



# 47. Trastuzumab 6mg/kg intravenous infusion in 250ml sodium chloride 0.9% over 90 minutes

Administration Instructions

The first infusion of trastuzumab must be administered over 90 minutes. If this is well tolerated administer subsequent infusions over 30 minutes

## 48. Metoclopramide 10mg oral or intravenous

## 49. Warning - Check Docetaxel Dose

Administration Instructions

The dose of docetaxel may be increased to 100mg/m² in those individuals who tolerate the 75mg/m² dose with no issues. The dose in ARIA is set at 75mg/m²

# 50. Dexamethasone 8mg twice a day oral (from TTO)\*

Administration Instructions

Ensure the patient has taken the dexamethasone pre-medication the day before and the day of docetaxel administration (and the day after). On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg (or equivalent dose) IV stat 15-30 minutes before chemotherapy. If the patient has already taken a dose of dexamethasone do not administer this dose

# 51. Docetaxel 75mg/m² intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

Administration Instructions

Ensure the patient has taken the dexamethasone pre-medication the day before and the day of docetaxel administration (and the day after). On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg (or equivalent dose) IV stat 15-30 minutes before chemotherapy.

- 52. Chlorphenamine 10mg intravenous when required for infusion related reactions
- 53. Hydrocortisone 100mg intravenous when required for infusion related reactions

## 54. Paracetamol 1000mg oral when required for infusion related reactions

Administration Instructions

Please check if the patient has taken paracetamol. Maximum dose is 4g per 24 hours. There should be 4 hours between doses

## **Take Home Medicines**

## 55. Metoclopramide 10mg three times a day oral when required

Administration Instructions

When required for nausea. Please supply five days or an original pack if appropriate

### 56. Growth factor according to local formulary choice.

Administration Instructions

Dispense according to local formulary choices;

- filgrastim or bioequivalent 30 million units once a day subcutaneous for 7 days starting on day 3 of the cycle
- lenograstim or bioequivalent 33.6 million units once a day subcutaneous for 7 days starting on day 3 of the cycle
- pegfilgrastim or bioequivalent 6mg once a day subcutaneous on day 2 of the cycle

# Cycle 8 – 21 (inclusive)

#### Day 1

# 57. Pertuzumab 420mg intravenous infusion in 250ml sodium chloride 0.9% over 60 minutes

Administration Instructions

The first infusion of pertuzumab should be given over 60 minutes. If this is well tolerated subsequent infusions may be given over 30 minutes



58. Trastuzumab 6mg/kg intravenous infusion in 250ml sodium chloride 0.9% over 90 minutes

Administration Instructions

The first infusion of trastuzumab must be administered over 90 minutes. If this is well tolerated administer subsequent infusions over 30 minutes

- 59. Chlorphenamine 10mg intravenous when required for infusion related reactions
- 60. Hydrocortisone 100mg intravenous when required for infusion related reactions
- 61. Paracetamol 1000mg oral when required for infusion related reactions
  Administration Instructions
  Please check if the patient has taken paracetamol. Maximum dose is 4g per 24 hours. There should be 4 hours between doses

<sup>\*</sup> In Aria Planner the dexamethasone 8mg twice daily will appear on days 1, 2, 3 of treatment. This is the supply for the next cycle. The administration instructions reflect this. On the last cycle no dexamethasone will appear for prescribing.



## **DOCUMENT CONTROL**

Version	Date	Amendment	Written By	Approved By
1.3	July 2024	Trastuzumab updated with national dose banding Warning for increased docetaxel dose added to cycle 7	Alexandra Pritchard Pharmacist	Nanda Basker Pharmacist
1.2	Nov 2020	Updated monitoring with DPD testing Coding removed	Donna Kimber Pharmacy Technician	Rebecca Wills Pharmacist
1.1	Feb 2020	Admin instructions updated for GCSF following docetaxel in the regimen summary	Rebecca Wills Pharmacist	Dr Deborah Wright Pharmacist
1	Nov 2019	None	Dr Deborah Wright Pharmacist	Dr Sanjay Raj Consultant Clinical Oncologist

This chemotherapy protocol has been developed as part of the chemotherapy electronic prescribing project. This was and remains a collaborative project that originated from the former CSCCN. These documents have been approved on behalf of the following Trusts;

Hampshire Hospitals NHS Foundation Trust NHS Isle of Wight Portsmouth Hospitals NHS Trust Salisbury NHS Foundation Trust University Hospital Southampton NHS Foundation Trust Western Sussex Hospitals NHS Foundation Trust

All actions have been taken to ensure these protocols are correct. However, no responsibility can be taken for errors which occur as a result of following these guidelines.