Lancashire & South Cumbria Cancer Network
Systemic Anticancer Treatment Protocol

DRUG REGIMEN
Trastuzumab, pertuzumab, docetaxel and carboplatin

Indication for use
Neoadjuvant treatment of locally advanced, inflammatory or early breast cancer at high risk of recurrence in patients with HER2 positive disease

Regimen

DRUG & DOSE	FLUID	ROUTE/TIME
Trastuzumab 6mg/kg (first dose 8mg/kg)	250ml 0.9% sodium chloride	IV over 90 mins
Pertuzumab 420mg (first dose 840mg)	250ml 0.9% sodium chloride	IV over 60 mins
Docetaxel 75mg/m^2	250ml 0.9% sodium chloride	IV over 60 mins
Carboplatin AUC6	500ml 5% glucose	IV over 60 mins

Repeat every 3 weeks to the total of 6 cycles,

Then:
If node positive disease: trastuzumab and pertuzumab to be given every 3 weeks up to a total of 12 months treatment

If node negative disease: single agent trastuzumab to be given every 3 weeks up to a total of 12 months treatment

N.B: Pre-medicate with 8mg Dexamethasone bd po for 3 days starting 24 hours before docetaxel.
Subsequent doses of pertuzumab 420 mg can be given over 30-60 mins. Subsequent doses of trastuzumab 6 mg/kg can be given over 30 mins.
Patients should receive GCSF support x 5 days (filgrastim 5 mcg/kg SC on days 3-7) with each cycle during 6 cycles of chemotherapy.

Investigations prior to initiating treatment
HER2 IHC 3+ or FISH positive
Baseline LVEF greater than or equal to 55% on MUGA or Echocardiogram
FBC, U&Es, LFTs and bone profile
Height and weight

Cautions
- Uncontrolled hypertension or angina
- Cardiac dysfunction (requires monitoring as below)
- Raised levels of liver enzymes (see below)
- Hypersensitivity reactions
- Elderly patients

Investigations during treatment
FBC/U&Es/LFTs/Bone every 3 weeks during chemotherapy, then every 3 months when on trastuzumab single agent
LVEF assessment on MUGA or ECHO every 3 cycles during combination treatment, then every 3-4 months when on trastuzumab single agent

Acceptable levels for treatment to proceed (if outside these levels contact consultant or defer one week)
Neuts >1.0
Platelets >100
Bilirubin within normal limits
AST/ALT < 2.5 X ULN

Common Side Effects
Hair loss, prolonged neutropenia, allergic reactions, diarrhoea, neuropathy, nausea, vomiting, fatigue, anaemia, thrombocytopaenia, mucositis

Dose Modification Criteria
Dose modifications are not recommended for trastuzumab and pertuzumab

Consider 25% dose reduction of carboplatin and docetaxel:

- Febrile neutropenia
- Severe / prolonged neutropenia
- Grade 3 diarrhoea
- Grade 2 neuropathy
- Rising ALT / AST

Discontinue treatment:

- Life threatening sepsis
- Grade 4 toxicity

Dose Delays
If the interval between subsequent doses of pertuzumab is greater than 6 weeks then a loading dose of 840mg should be administered
If the interval between subsequent doses of trastuzumab is greater than 6 weeks then a loading dose of 8mg/kg should be administered

Specific Information on Administration
Pre-med: Paracetamol 1g 30-60 minutes before treatment, and regularly for 24 hours after treatment. Pertuzumab and trastuzumab may be administered in any order but both should be given before chemotherapy. An observation period of 30-60 minutes is recommended after pertuzumab before other drugs are administered.

Treatment of hypersensitivity reactions:

Mild – Stop infusion. Give 10 mg IV Piriton and 100 mg IV Hydrocortisone. Re start infusion slowly after 30 minutes. If further problems discontinue infusion and seek senior advice.

Severe – Stop infusion. Give 100 mg Hydrocortisone and 10 mg Piriton stat. Get HELP. May need further resuscitation. Patient to be admitted.

THIS PROTOCOL HAS BEEN DIRECTED BY DR BEZECNY, CONSULTANT ONCOLOGIST

RESPONSIBILITY FOR THIS PROTOCOL LIES WITH THE HEAD OF SERVICE

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