Chemotherapy Protocol

BREAST CANCER

TRASTUZUMAB SC

Regimen

- Breast Cancer – Trastuzumab SC

Indication

- Treatment of metastatic breast cancer over expressing HER2

  - as monotherapy for the treatment of those patients who have not received chemotherapy for their metastatic disease and for whom an anthracycline is not suitable

  - in combination with paclitaxel for the treatment of those patients who have not received chemotherapy for their metastatic disease and for whom an anthracycline is not suitable

  - in combination with docetaxel for the treatment of those patients who have not received chemotherapy for their metastatic disease

  - in combination with an aromatase inhibitor for the treatment of postmenopausal patients with hormone receptor positive metastatic breast cancer not previously treated with trastuzumab

- Treatment of early breast cancer overexpressing HER2

  - following adjuvant / neoadjuvant surgery, chemotherapy or radiotherapy

  - in combination with neoadjuvant chemotherapy followed by adjuvant trastuzumab, for locally advanced (including inflammatory) disease or tumours greater than 2cm in diameter

- WHO Performance status 0, 1, 2

Toxicity

Drug	Adverse Effect
Trastuzumab	Cardiotoxicity, acute respiratory distress syndrome,

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

Monitoring

Regimen

- HER2 status before initiating therapy
- Cardiac function must be assessed prior to starting trastuzumab. Thereafter in the adjuvant setting it should be assessed every 12 weeks unless there is clinical evidence of cardiac failure. In the metastatic setting cardiac function should be assessed every 12 weeks for 24 weeks then every 24 weeks thereafter, again, unless there is clinical evidence suggestive of cardiac failure.
- FBC, U&Es and LFTs every 12 weeks

Dose Modifications

No dose reductions were made for subcutaneous trastuzumab during clinical trials. Patients may continue therapy during periods of reversible, chemotherapy induced myelosupression. If treatment with trastuzumab is not tolerated it should be stopped.

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.

Hepatic Impairment

Drug	Bilirubin (µmol/L)		AST/ALT units	Dose
Trastuzumab SC	n/a		n/a	No information available

Renal Impairment

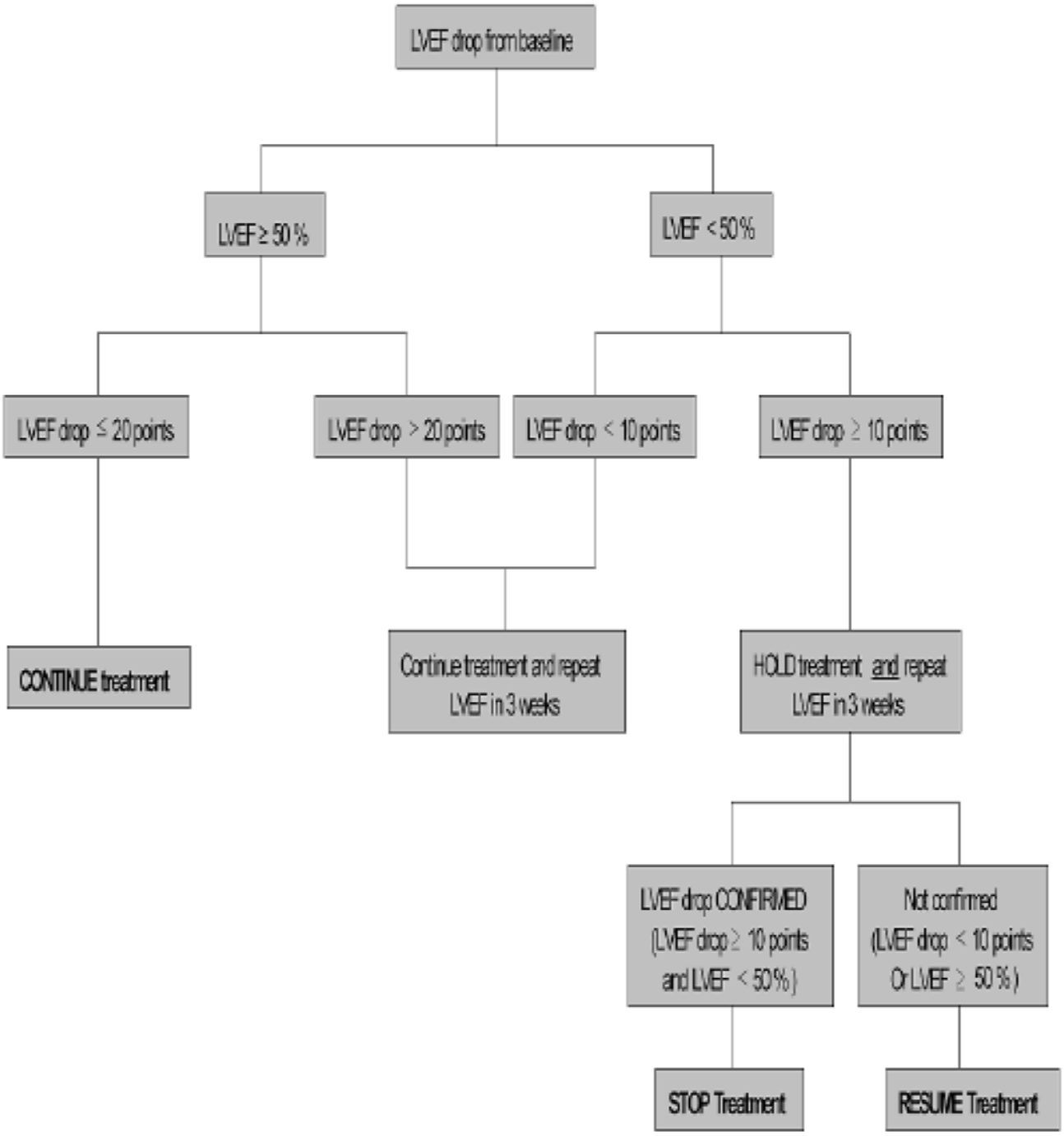
Drug	Creatinine Clearance (ml/min)	Dose (% of original dose)
Trastuzumab SC	n/a	No information available

Cardiac

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

Subsequent Echocardiograms

The flow chart below describes the process to be followed if there is an **asymptomatic** decline in LVEF during trastuzumab treatment.



In general patients who develop **symptomatic** cardiac dysfunction should have 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

21 day cycle. The number of cycles will vary depending on the indication at the point at which trastuzumab therapy is initiated. Eighteen cycles will be set in Aria

Drug	Dose	Days	Administration
Trastuzumab SC	600mg	1	Subcutaneous injection over 2-5 minutes

Dose Information

- If the patient misses a dose of subcutaneous trastuzumab it is recommended to administer the 600mg dose as soon as possible. The interval between consecutive subcutaneous administrations should not be less than three weeks.

Administration Information

- Trastuzumab is associated with hypersensitivity reactions. The SPC recommends that patients should be observed for six hours following the first administration of subcutaneous trastuzumab and for two hours following subsequent administrations. In practice much shorter observation periods have been safely used.

- The injection site should be alternated between the left and right thigh. New injections should be given at least 2.5cm from the old site and never into areas where the skin is red, bruised, tender or hard.

Extravasation

- Trastuzumab - neutral

Additional Therapy

- For treatment of trastuzumab hypersensitivity reactions ‘once only when required’ doses of the following should be prescribed;

    - chlorphenamine 10mg intravenous
    - hydrocortisone 100mg intravenous
    - paracetamol 1000mg once oral

Coding (OPCS 4.6)

- Procurement – X71.3

- Delivery – X72.3

References

1. Pivot X, Gligorov J, Muller V et al. Preference for subcutaneous or intravenous administration of trastuzumab in patients with HER2 positive early breast cancer: an open label randomized study. Lancet Oncol 2013; 14 (10): 962-70.
2. Ismael G, Hegg R, Muehlbauer S et al. Subcutaneous versus intravenous administration of (neo) adjuvant trastuzumab in patients with HER2+ clinical stage I-III breast cancer (HannaH): a phase 3 open label multicenter randomized trial.
3. Summary of Product Characteristics accessed at www.medicines.org.uk on the 4th December 2013

REGIMEN SUMMARY

Trastuzumab SC

Cycle 1

1. Trastuzumab 600mg subcutaneous injection over 2 to 5 minutes

2. Chlorphenamine 10mg intravenous when required for trastuzumab related reactions

3. Hydrocortisone 100mg intravenous when required for trastuzumab related reactions

4. Paracetamol 1000mg oral when required for trastuzumab related reactions

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1.1	August 2014	Bolus removed from intravenous bolus throughout text	Donna Kimber Pharmacy Technician	Dr Debbie Wright Pharmacist
1	Dec 2013	None	Dr Deborah Wright Pharmacist	Dr Ellen Copson Consultant Medical Oncologist Dr Caroline Archer Consultant Medical 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 Hospitals NHS Foundation Trust
University Hospital Southampton NHS Foundation Trust
Western Sussex Hospitals NHS 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.