TRASTUZUMAB (HERCEPTIN) SUBCUTANEOUS for advanced disease

First-line treatment in HER2+ve metastatic breast cancer, usually in combination with paclitaxel or vinorelbine

As monotherapy in HER2+ve breast cancer, in trastuzumab-naïve patients who have received at least 2 chemotherapy regimens for metastatic disease, according to NICE guidelines

N.B. This protocol should **not** be followed for patients on pertuzumab plus trastuzumab

Drug/Dosage: Trastuzumab (Herceptin) 600mg s/c slow bolus every 3 weeks

At each clinical review, note that all trastuzumab (Herceptin) doses are to be prescribed and confirmed up until the next clinical review is due.

Administration: Paracetamol 1000mg po 30 minutes before the 1st dose only.
Administer as a subcutaneous injection over 2-5 minutes.
The injection site should be alternated between the left and right thigh. New injections should be given at least 2.5 cm from the old site and never into areas where the skin is red, bruised, tender or hard.

In combination with paclitaxel:
If the first dose of s/c trastuzumab is being given with the 1st or 2nd dose of a taxane, both drugs may be given on the same day: administer the s/c trastuzumab first, wait one hour, then initiate the paclitaxel infusion.
For subsequent doses of s/c trastuzumab, there is no need for a specific time interval between the trastuzumab and starting the taxane.

It has been agreed locally that patients starting a new course of s/c trastuzumab should be observed for signs or symptoms of administration-related reactions after each dose as follows:
- for 4 ½ hours after the first injection
- for 30 minutes after the second injection
- no observation period after subsequent doses

No formal observation period is necessary for patients switching mid-course from IV to s/c trastuzumab.

Patients should also be counselled about the possibility of delayed symptoms, and instructed to contact the hospital in the event of these occurring.

Frequency: Every 3 weeks - administer trastuzumab until disease progression outside of the CNS.

If the patient misses a dose, administer the next 600 mg dose (i.e. the missed dose) as soon as possible. The interval between consecutive trastuzumab s/c doses should not be less than three weeks.

Main Toxicities: Administration-related symptoms: fever, chills, hypotension, wheeze, bronchospasm, tachycardia, reduced oxygen saturation, headache, nausea, rash (occur mainly with 1st dose)
Local reactions at injection site: erythema, pruritis, oedema, rash
Cardiotoxicity (see Comments)

Anti-emetics: mildly emetogenic

Reason for Update: renamed as trastuzumab (Herceptin); b.p. monitoring added	Approved by Consultant: Dr A Neal
Version: 2	Approved by Lead Chemotherapy Nurse: V Mumford
Supersedes: Version 1	Date: 4.3.14
Prepared by: S Taylor	Checked by: C Tucker

Regular Investigations:	FBC	baseline, at 4 and 8 months, then 6 monthly
	U&Es and LFTs	baseline, at 4 and 8 months, then 6 monthly
	Echo*/MUGA scan	baseline; at 4 and 8 months, then every 6 months thereafter Patients who develop asymptomatic cardiac dysfunction will require more frequent monitoring e.g. every 6–8 weeks.
	Blood pressure**	baseline, at 4 and 8 months, then every 6 months

* An echocardiogram is the preferred test, but whichever test is used initially for an individual, should ideally be used throughout

** If blood pressure ≥ 140/90 mmHg, a diagnosis of hypertension needs to be confirmed by asking patient to visit GP for ambulatory or home blood pressure monitoring.
Patients with a confirmed diagnosis of hypertension should be treated with an ACE inhibitor which is also licensed for the treatment of heart failure e.g. ramipril.

Comments:

The risk of developing heart failure is greatest when trastuzumab is used in combination with anthracyclines, and so they should not be used concurrently.

Caution should be exercised in treating patients who present with symptomatic heart failure, history of hypertension or documented coronary artery disease.

If LVEF drops ≥ 10 ejection fraction points from baseline **and** to below 50%, treatment should be suspended and a repeat LVEF assessment performed within approximately 3 weeks.

If LVEF has not improved, or declined further, after 3 weeks, or symptomatic cardiac failure has developed, discontinuation of trastuzumab should be strongly considered, unless the benefits for the individual patient are deemed to outweigh the risks.

If symptomatic cardiac failure develops during trastuzumab therapy, it should be treated with standard medications for this purpose.

Dose Modifications:

No reductions in the dose of s/c trastuzumab were made during clinical trials. Patients may continue trastuzumab therapy during periods of reversible, chemotherapy-induced myelosuppression.

References:

BO22227 trial (unpublished)