North West Coast
Strategic Clinical Networks

Chemotherapy protocol

Drug regimen
Gemcitabine & carboplatin (bladder)

Indications for use
Palliative chemotherapy for metastatic or recurrent TCC bladder where creatinine clearance (Cl_{Cr}) < 50mls/minute

Regimen

Day	Drug	Fluid	Time
1	Carboplatin (AUC 5)	500mls 5% Glucose	1 hour
1 & 8	Gemcitabine 1000mg/m^2	250ml 0.9% Sodium chloride	30 Mins

Regimen to be repeated 3 weekly for 3 to 6 cycles at clinician's discretion. Interval assessment after 3 cycles

Investigations prior to initiating treatment
FBC, U&Es, LFTs
CXR, CT Thorax/abdomen/pelvis or other baseline test to monitor response
Creatinine clearance
If calculated Cl_{Cr} < 20mls per minute, single agent gemcitabine to be considered

Investigations and consultations prior to each cycle
FBC, U&Es, LFTs
The liver function test may be retrospectively looked at (i.e. after the chemotherapy treatment) **unless** they are known to be abnormal then they need to be repeated the day before so that the results are available pre-chemotherapy

Consultation day 1 of each cycle

Acceptable limits for treatment to proceed (if outside these delay one week or contact consultant)
No new cycle to start unless WBC >/= 3 x 10^9/L, ANC > 1.0 x 10^9/L, and platelets >/= 100 x 10^9/L
Delay treatment 1 week or until platelets ≥ 100 and neutrophils ≥ 1.0 recovers
If serum creatinine is raised by >20% repeat creatinine clearance prior to next cycle

Cautions
The Calvert formula is not considered reliable if the creatinine clearance is <40 ml/min. However, prescribing according to surface area leads to excessive doses. Therefore, even in those patients with renal impairment the Calvert formula will be used and doses modified subsequently up or down depending on blood counts.

This regimen should not be administered with radical radiotherapy. Regimen may cause haemolytic ureaemic syndrome. It should be used with caution in those patients with abnormal liver function. Elevation of liver transaminases occurs in 2/3 of patients but should rarely lead to cessation of treatment. Mild proteinuria and haematuria occur in 50% of patients but are generally not clinically significant.

Side Effects
Allergy (rash often with pruritis), hypersensitivity reactions (usually after > 6 cycles), alopecia (very occasionally), nausea and vomiting, bone marrow suppression, flushing effects

Dose modification criteria
Day 8 WBC > 3.0 and platelets > 75, full dose gemcitabine
Day 8 WBC 2-3 and platelets > 50, full dose gemcitabine
Day 8 WBC < 2 or platelets < 50, withhold day 8 gemcitabine
20% dose reduction if there is a delay >1 week, if there has been a previous delay of more than 2 cycles or if the patient experiences neutropenic sepsis

Specific Information on Administration
Routine use of prophylactic antibiotics is ***not*** indicated

This protocol has been directed by Dr Birtle, clinician for Urological cancer

Date **March 2017**
Review **March 2019**
Version **9**