GEMCITABINE

1. First or subsequent line treatment of advanced or metastatic pancreatic cancer
2. Adjuvant use after surgical resection of pancreatic cancer
3. Advanced or metastatic biliary tract cancers, only if not suitable for cisplatin-based treatment

Drug/Dose:	Gemcitabine	1000mg/m^2	IV	Day 1, Day 8 and Day 15

Administration: In 250ml 0.9% sodium chloride over 30 minutes

Frequency: Day 1, 8 and 15 of a 28 day cycle
Repeat for 6 cycles

Main Toxicities: myelosuppression; erythematous rash; flu-like syndrome; peripheral oedema (mild –moderate & reversible); ovarian failure/infertility

Anti-emetics: mildly emetogenic

Extravasation: non-vesicant

Regular Investigations:	FBC	Day 1, 8 and 15
	U&Es	Prior to each dose on cycle 1, then Day 1 of subsequent cycles
	LFTs	Prior to each dose on cycle 1, then Day 1 of subsequent cycles
	CA 19-9	every 4 weeks (including adjuvant setting)

Dose Modifications

Haematological Toxicity: **Day 1 of each cycle:**

Neutrophils < 1.5 x 10^9/l or Platelets < 100 x 10^9/l	Delay treatment for 1 week. Repeat FBC and, if normal, proceed with treatment*.

*Reduce the gemcitabine dose to 75% of the original cycle initiation dose if any of the following have occurred:

- Neutrophils < 0.5 x 10^9/l for > 5 days
- Neutrophils < 0.1 x 10^9/l for > 3 days
- Febrile neutropenia
- Platelets < 25 x 10^9/l
- Cycle delay of more than one week due to toxicity

Do not re-escalate the dose.

Reason for Update: omitting 4th dose of cycle 1 for advanced disease; indications updated	Approved by Consultant: Dr S Cummins
Version: 6	Approved by Lead Chemotherapy Nurse: S Wills-Percy
Supersedes: Version 5	Date: 26.7.17
Prepared by: S Taylor	Checked by: C Tucker

Day 8 and Day 15:

Neutrophils		Platelets	Gemcitabine Dose
> 1.0 x 10^9/l	**and**	> 100 x 10^9/l	Give 100% of Day 1 dose
0.5 – 1.0 x 10^9/l	**or**	50 – 100 x 10^9/l	Give 75% of Day 1 dose
< 0.5 x 10^9/l	**or**	< 50 x 10^9/l	Omit 1 week (do not defer)

For doses within a cycle, patients who have had a dose reduction should have their next dose according to the FBC on the day of gemcitabine administration, i.e. the dose may be escalated back to 100% if their blood count is adequate.
However, if after dose reduction to 75% on Day 8, their blood count on Day 15 is still inadequate i.e. neutrophils 0.5-1.0 or platelets 50-100, the same dose (dose reduction to 75% of Day 1 dose) should be given.

For patients with recurrent dose omissions or dose reductions following 100% dose, maintain the dose at 75% of full dose with no re-escalation. If in doubt, discuss with Consultant.

Renal Impairment: If CrCl < 30ml/min, consider dose reduction – clinical decision

Hepatic Impairment: If bilirubin > 27 µmol/L, initiate treatment with gemcitabine 800mg/m^2

Reference:
Burris, H.A. et al (1997), JCO; Vol 15 (6): 2403 – 2413 (advanced pancreas)
Oettle, H et al; JAMA 2007; 297 (3): 267 – 277 (adjuvant)
Neuhaus, P et al; JCO 2008; 26 (Suppl 15S): Abstract LBA4504 (adjuvant)
Neoptolemos, J et al; JCO 2009; suppl 18S; 27: Abstract LBA4505 (adjuvant)