# GEMCITABINE CISPLATIN

## INDICATION (ICD10) C56, C67, C80

1. Metastatic bladder cancer bladder cancer
2. Neoadjuvant or adjuvant bladder cancer
3. 2nd or 3rd line relapsed ovarian cancer with carboplatin sensitivity
4. Unknown primary if appropriate (unlicensed)

PS 0, 1, 2

## REGIMEN

| | | |
|---|---|---|
| Day 1 | GEMCITABINE | 1000mg/m$^2$** in 250ml sodium chloride 0.9% (or licensed dose volume) IV infusion over 30 minutes |
| | Prehydration | |
| | CISPLATIN | 70mg/m$^{2*}$ in 1000ml sodium chloride 0.9% IV infusion over 2 hours |
| | Posthydration | |
| Day 8 | GEMCITABINE | 1000mg/m$^2$** in 250ml sodium chloride 0.9% (or licensed dose volume) IV infusion over 30 minutes |

*or split cisplatin dose (35mg/m$^2$ on days 1 and 8) for patients with lower GFR

** ovarian elderly patients start at 750mg/m$^2$ days 1 and 8

## CYCLE FREQUENCY AND NUMBER OF CYCLES

Neoadjuvant bladder cancer - every 21 days for up to 4 cycles
Adjuvant bladder cancer - every 21 days for 4 cycles
Metastatic bladder cancer - every 21 days for 6 cycles
Ovarian cancer– every 21 days for 6 cycles

## ANTI-EMETICS

High risk day 1
Low risk day 8

## CONCURRENT MEDICATION REQUIRED

| | |
|---|---|
| Cisplatin | Ensure adequate pre and post hydration.<br>If urine output is <100ml/hour or if patient gains >2kg in weight during IV administration post cisplatin give 20-40mg furosemide PO/IV. |

## EXTRAVASATION AND TYPE OF LINE / FILTERS

Cisplatin - exfoliant
Gemcitabine – neutral

No filters required
Peripheral line

## INVESTIGATIONS

Blood results required before SACT administration
FBC every dose, U&E, LFTs and creatinine every cycle
Neutrophils x 10$^9$/L ≥1.5 on day 1 or ≥1.0 on day 8
Platelets x 10$^9$/L ≥100 (ovarian day 8 platelets ≥75)
GFR assessed using EDTA result or calculated creatinine clearance at the Consultant's discretion.
CA125 baseline and day 1 every cycle Baseline weight and every cycle (ovarian)
Baseline weight and every cycle

## MAIN TOXICITES AND ADVERSE REACTIONS

| | |
|---|---|
| Cisplatin | Nephrotoxicity – ensure adequate pre and post hydration is prescribed.<br>Ototoxicity – assess patient for tinnitus or hearing abnormalities. |
| Gemcitabine | Diarrhoea – see dose modifications, treat with loperamide or codeine<br>Mucositis – see dose modifications, use routine mouthcare |

## INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS
**(not exhaustive list check SPC/BNF/Stockleys)**

| | |
|---|---|
| Cisplatin | Aminoglycosides increased risk of nephrotoxicity and ototoxicity. Renal function should be well monitored and audiometric tests as required. Cisplatin can cause a decrease in phenytoin serum levels. This may lead to reappearance of seizures and may require an increase of phenytoin dosages. |

## DOSE MODIFICATIONS

### Haematological

Gemcitabine

| | |
|---|---|
| Neutrophils >1.5x$10^9$/L and platelets >100x$10^9$/L | give 100% dose |
| Day 1 Neutrophils <1.5x$10^9$/L or platelets <100x$10^9$/L | delay treatment (day 1) |
| Day 8 Neutrophils <1.0x$10^9$/L or platelets <100x$10^9$/L | omit treatment (day 8) |

### Non-haematological

If patient complains of tinnitus, tingling of fingers and/or toes, discuss with SpR or Consultant before administration.

Gemcitabine

| | |
|---|---|
| Diarrhoea and/or mucositis grade 2 | omit until toxicity resolved then restart at 100% dose |
| Diarrhoea and/or mucositis grade 3 | omit until toxicity resolved then restart at 75% dose |
| Diarrhoea and/or mucositis grade 4 | omit until toxicity resolved then restart at 50% dose |

Omit if treatment is delayed for more than 4 weeks but continue with Cisplatin

### Hepatic impairment

Gemcitabine

| | |
|---|---|
| Bilirubin >27µmol/L | initiate treatment with 80% dose |

### Renal impairment

Cisplatin

| | |
|---|---|
| CrCl >60ml/min | give 100% dose |
| CrCl 45-60ml/min | give 75% dose |
| CrCl <45ml/min | not recommended |

**REFERENCES**

1. Pfisterer et al, Journal of Clinical Oncology 24, 4699-707
2. Papadimitriou et al.Gynaecological Oncology 2004, 92, p152-9
3. ICON 6 study