BC Cancer Protocol Summary for Treatment of Locoregionally Recurrent and/or Metastatic Nasopharyngeal Cancer with Platinum and Gemcitabine

***Protocol Code**:*	*HNNAVPG*
***Tumour Group**:*	*Head and Neck*
***Contact Physician**:*	*Dr. Cheryl Ho*

ELIGIBILITY:

- Locoregionally recurrent and/or metastatic nasopharyngeal cancer not amenable to curative local therapy. Preferably no prior CISplatin exposure – at least for locoregionally recurrent/metastatic disease

EXCLUSIONS:

- If there is a contraindication to CISplatin (e.g. deafness, intolerance to fluid load, neuropathy), consideration should be given to using CARBOplatin.
- ECOG status greater than or equal to 3

TESTS:

- Baseline: CBC & differential, platelets, creatinine, Alk Phos, albumin, ALT, GGT, bilirubin
- Before each treatment:
  - Day 1 – CBC & differential, platelets, creatinine, ALT, bilirubin.
  - Day 8 – CBC & differential, platelets, creatinine
  - Day 15 – CBC & Differential , platelets

PREMEDICATIONS:

- Antiemetic protocol for highly emetogenic chemotherapy (see protocol SCNAUSEA).

Warning: The information contained in these documents are a statement of consensus of BC Cancer professionals regarding their views of currently accepted approaches to treatment. Any clinician seeking to apply or consult these documents is expected to use independent medical judgement in the context of individual clinical circumstances to determine any patient's care or treatment. Use of these documents is at your own risk and is subject to BC Cancer's terms of use available at www.bccancer.bc.ca/terms-of-use

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
(Administer gemcitabine first)		
gemcitabine	1,000 mg/m^2 /day on days 1, 8 and 15 (total dose per cycle = 3,000 mg/m^2)	IV in 250 mL NS over 30 min
CISplatin	50 mg/m^2 /day on day 1 and 8	Prehydrate with 1,000 mL NS over 1 hour, then CISplatin IV in 500 mL NS with potassium chloride 10 mEq, magnesium sulfate 1 g, 30 g mannitol over 1 hour

- Repeat every 28 days x 4 to 6 cycles

Alternatively, CARBOplatin may be used instead of CISplatin:

DRUG	DOSE	BC Cancer Administration Guidelines
CARBOplatin	AUC 5 or 6 DAY 1 only Dose = AUC† x (GFR* + 25)	IV in 100 to 250 mL **NS** over 30 minutes.

† determined at discretion of the attending medical oncologist.

*GFR preferably from nuclear renogram, if not possible use:

$$\text{GFR} = \frac{\text{N x (140-age in years) x wt (kg)}}{\text{serum creatinine (micromol/L)}} \qquad \text{N = 1.04 (women) or 1.23 (men)}$$

The estimated GFR should be capped at 125 mL/min when it is used to calculate the initial CARBOplatin dose. When a nuclear renogram is available, this clearance would take precedence.

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DOSE MODIFICATIONS:

1. **Hematology**:

For gemcitabine day 1 of each cycle

ANC (x 10^9/L)		Platelets (x 10^9/L)	Dose
greater than or equal to 1.0	and	greater than or equal to 100	100%
0.5 to less than 1.0	or	75 to less than 100	75%
less than 0.5	or	less than 75	**Delay***
CISplatin also delayed			

For gemcitabine day 8 and 15 of each cycle

ANC (x 10^9/L)		Platelets (x 10^9/L)	Dose**
greater than or equal to 1.0	and	greater than or equal to 100	100%
0.5 to less than 1.0	or	75 to less than 100	75%
less than 0.5	or	less than 75	**Omit**
****Dose adjustment only for the day of treatment the CBC is drawn**			

2. **Renal Dysfunction**:

Calculated Cr Clearance (mL/min)	CISplatin dose	Gemcitabine dose
greater than or equal to 50	100%	100%
less than 50	Hold CISplatin or delay with additional IV fluids or go to CARBOplatin option	100%

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3. **Other Toxicities**: for gemcitabine only

Grade	Stomatitis		Diarrhea	Dose
1	Painless ulcers, erythema or mild soreness	and/or	Increase of 2 to 3 stools/day	100%
2	Painful erythema, edema, or ulcers but can eat	and/or	Increase of 4 to 6 stools, or nocturnal stools	Omit until toxicity resolved then resume at 100%
3	Painful erythema, edema, or ulcers and cannot eat	and/or	Increase of 7 to 9 stools per day or incontinence, malabsorption	Omit until toxicity resolved then resume at 75%
4	Mucosal necrosis, requires parenteral support	and/or	Increase of greater than or equal to 10 stools per day or grossly bloody diarrhea requiring parenteral IV support	Omit until toxicity resolved then resume at 50%

PRECAUTIONS:

1. **Neutropenia**: Fever or other evidence of infection must be assessed promptly and treated aggressively.
2. **Renal Toxicity**: Nephrotoxicity is common with CISplatin. Encourage oral hydration. Avoid nephrotoxic drugs such as aminoglycoside antibiotics. Irreversible renal failure associated with hemolytic uremic syndrome may occur (rare) with gemcitabine. Use caution with pre-existing renal dysfunction.
3. **Pulmonary Toxicity**: Acute shortness of breath may occur. Discontinue treatment if drug-induced pneumonitis is suspected.

Call Dr. Cheryl Ho or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

References:

1. Ngan RK, Yiu HH, Lau WH, et al. Combination gemcitabine and cisplatin chemotherapy for metastatic or recurrent nasopharyngeal carcinoma: report of a phase II study. Ann Oncol 2002;13(8):1252-8.
2. Chi KH, Chang YC, Chan WK, et al. A phase II study of carboplatin in nasopharyngeal carcinoma. Oncology 1997;54(3):203-7.

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