

5 FLUOROURACIL & LEUCOVORIN & RADIOTHERAPY (MACDONALD REGIMEN)

Post-operative chemo-radiotherapy for adenocarcinoma of the stomach or gastro-oesophageal junction

Drugs/Dosage:

Week 1 of chemotherapy: (4 weeks before RT)	5-Fluorouracil	425mg/m ²	IV daily	D1 – D5
	Calcium Leucovorin	50mg	IV daily	D1 – D5
Week 1 of chemo-radiotherapy: (28 days after start day)	5-Fluorouracil	400mg/m ²	IV daily	D1 - D4 of Week 1
	Calcium Leucovorin	50mg	IV daily	D1 - D4 of Week 1
Week 5 of chemo-radiotherapy:	5-Fluorouracil	400mg/m ²	IV daily	D3 - D5 of Week 5
	Calcium Leucovorin	50mg	IV daily	D3 - D5 of Week 5

Radiotherapy: 45Gy given over 25 fractions (1.8Gy/#) on weekdays only for 5 weeks
On days when chemotherapy administered, RT should ideally be given within one hour after the chemotherapy, and definitely not more than 2 hours after chemotherapy.

One month after completion of Radiotherapy, 2 courses of the following given 4 weeks apart;

5-Fluorouracil	425mg/m ²	IV	D1 – D5
Calcium Leucovorin	50mg	IV	D1 – D5

Administration: Bolus injections.
Leucovorin should be administered first.

Frequency: As above
Clinical review weekly whilst on Chemo/RT, and prior to final 2 cycles

Main Toxicities: Mucositis; Diarrhoea; Myelosuppression;
Palmar-Plantar Erythema (PPE); Ovarian failure/Infertility

Anti – emetics: Mildly emetogenic
Metoclopramide is required before each fraction, and prn, throughout radiotherapy

Extravasation: Non – vesicant

Regular investigations: FBC Weekly during RT, and D1 of each course of chemotherapy
LFTs 4 weekly
U&Es 4 weekly
MAG 3 scan prior to starting RT

Comments: Pyridoxine 50 mg po tds should be given for palmar-plantar erythema.

Advice on mouthcare and use of prophylactic mouthwashes should be given. If significant mucositis, consider use of ice chips (ice sucked by patient, starting 5 minutes before chemotherapy given and continued during administration) as an adjunct to dose reduction.

Reason for Update: Info re Grade 3/4 toxicities amended	Approved by Matron: I Patterson
Version: 2	Approved by Consultant: Dr Essapen
Supersedes: Version 1	Date: 2.5.05
Prepared by: S Taylor	Checked by: C Tucker

Dose Modifications

Day 1 of week when chemotherapy due:

Neutrophils $< 1.5 \times 10^9/l$

or

Platelets $< 100 \times 10^9/l$

or

Grade 3/4 persistent 5FU-associated toxicity

Delay chemotherapy for 1 week or until completely recovered.

Treat non-haematological symptoms appropriately.

For Grade 3 or 4 haematological and/or non-haematological toxicities, **discuss with Consultant before re-challenge**, with a dose reduction as specified by Consultant.

For any Grade 4 toxicity, the decision to continue with chemotherapy should only be made by a Consultant.

NB. If patient not fit to receive chemotherapy on Week 5 of chemo-radiotherapy, radiotherapy should continue as planned, with Week 5 chemotherapy omitted completely i.e. not deferred.

Hepatic Impairment

Moderate hepatic impairment	Reduce initial 5FU dose by 1/3
Severe hepatic impairment	Reduce initial 5FU dose by 1/2

Dose can be increased if no toxicity seen. If in doubt, check with the relevant Consultant.

References:

Macdonald, JS et al; NEJM; Vol 345; (10): 725-730

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