London Cancer
Systemic Treatment
Oesophageal and Gastric Cancer

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Contents
1. Oesophagus............................................................................................................3
  1.1. Adenocarcinoma .............................................................................................3
    1.1.1. Neo-adjuvant Chemotherapy: .................................................................3
    1.1.2. Adjuvant chemotherapy ........................................................................3
  1.2. Squamous Cell Carcinoma...............................................................................3
    1.2.1. Primary Chemoradiation: .........................................................................3
    1st Line: ..................................................................................................................3
    1.2.2. 2nd Line: ....................................................................................................3
2. Gastro-Oesophageal Junction................................................................................3
3. Gastric Cancer ........................................................................................................3
  3.1. Neo-adjuvant Chemotherapy: .........................................................................3
  3.2. Adjuvant Chemotherapy: ................................................................................3
  3.3. Adjuvant Chemoradiotherapy:........................................................................4
4. Palliative Chemotherapy for Oesophageal/ Gastric Cancers.................................4
  4.1. 1st Line Chemotherapy ....................................................................................4
  4.2. 2nd Line Chemotherapy ...................................................................................4
Appendix A: Chemotherapy Algorithms ........................................................................5
Appendix B .....................................................................................................................9
Chemotherapy Protocols ...........................................................................................9
  Adenocarcinoma and Squamous Cell Carcinoma of the Oesophagus ...............9
  Gastro-Oesophageal Junction ...............................................................................9
  Gastric ....................................................................................................................9
  Palliative Chemotherapy Options for OG Cancers.................................................10
5. References ...........................................................................................................12
1. **Oesophagus**

1.1. **Adenocarcinoma**

1.1.1. **Neo-adjuvant Chemotherapy:**
   - T3/4N0 or any T N1-2
   - **Middle third:**
     - 2 cycles of Cisplatin /5-Fluorouracil
     - OR
     - 2 cycles of Cisplatin/Capecitabine
   - **Lower third:**
     - 3 cycles of ECX Neo-adjuvantly followed by 3 cycles of ECX adjuvantly

1.1.2. **Adjuvant chemotherapy**
   - ECX or ECF (if patient not suitable for oral treatment) for 6 cycles
   - OR
   - Cisplatin 5-Fluorouracil
   - OR
   - Cisplatin and Capecitabine

1.2. **Squamous Cell Carcinoma**

1.2.1. **Primary Chemoradiation:**
   - **1st Line:**
     - Cisplatin/5 Fluorouracil
     - OR
     - Cisplatin/capecitabine
   - **2nd Line:**
     - Weekly Paclitaxel

2. **Gastro-Oesophageal Junction**

   Selected cases may be suitable for neo-adjuvant chemoradiation with Carboplatin and Paclitaxel as described in the CROSS trial.
   Similar options to Adenocarcinoma of the oesophagus should be considered.

3. **Gastric Cancer**

3.1. **Neo-adjuvant Chemotherapy:**
   - For T2 N0+ patients who are suitable for neo-adjuvant treatment.
   - ECX for 3 cycles Neo-adjuvantly followed by 3 cycles ECX adjuvantly
   - ECF can be used instead of ECX (if patient is not suitable for oral treatment)

3.2. **Adjuvant Chemotherapy:**
   - Patients who are unsuitable for neo-adjuvant therapy will be offered adjuvant chemotherapy. See above for patients treated with ECX neo-adjuvantly and followed by ECX adjuvantly.
   - FOLFOX or ECX or EOX can be used as an adjuvant chemotherapy option.
3.3. **Adjuvant Chemoradiotherapy:**
Some patients who are unsuitable for neo-adjuvant therapy or ECX adjuvantly will be offered adjuvant chemoradiotherapy as below.

Continuous 5-Fluorouracil IV 200mg/m2/day usually for 5 weeks  
OR  
Capecitabine Orally 625-825mg/m2 BD for 5 weeks

4. **Palliative Chemotherapy for Oesophageal/ Gastric Cancers**

4.1. **1st Line Chemotherapy**
EOX or ECX for 6 cycles  
If SCC then the anthracycline should be omitted, i.e. OX or CX.

If gastric or GOJ and eligible for trastuzumab (see below) can use:  
Trastuzumab/Cisplatin/5 Fluorouracil  
OR  
Trastuzumab/Cisplatin/Capecitabine  
*NICE TA 208 (November 2010)*
Trastuzumab, in combination with cisplatin and capecitabine or 5-fluorouracil, is recommended as an option for the treatment of people with human epidermal growth factor receptor 2 (HER2)-positive metastatic adenocarcinoma of the stomach or gastro-oesophageal junction who:
- Have not received prior treatment for their metastatic disease and  
- Have tumours expressing high levels of HER2 as defined by a positive immunohistochemistry score of 3 (IHC3 positive).

4.2. **2nd Line Chemotherapy**
Until recently there were scarce data on 2nd line therapy, but now we have data to suggest that chemotherapy improves OS over best supportive care.
Single agent Irinotecan  
Or  
Weekly paclitaxel  
Can use FOLFIRI instead of single agent irinotecan if poor performance status.

On further progression, fit patients should be considered for clinical trials.
Appendix A: Chemotherapy Algorithms
Treatment of Adenocarcinoma of oesophagus

Clinical presentation and MDT - Is patient suitable for radical treatment?

**NO**

- T1/2
- N0
- PS 0-1
- Adequate lung function

**YES**

- T3-4
- Or N1+
- PS 0-1
- Adequate lung/cardiac function

Neo-adjuvant Chemotherapy
- Middle third: 2-3 cycles Cisplatin/5FU OR Cisplatin/Capecitabine
- Lower third: 3 cycles ECX pre-resection and 3 cycles post resection

Resection

RM+

- N+
- Within 48 days
- Adjuvant chemotherapy OR Chemoradiation
- Regimens used: ECX- 6 cycles OR Cisplatin/SFU OR Cisplatin/Capecitabine
- Then follow up

RM-

Follow up

Recurrence

Palliative Chemotherapy Options
Treatment of Squamous Cell Carcinoma of Oesophagus

Clinical presentation and MDT - Is patient suitable for radical treatment?

**NO**

- Chemoradiation
  - Cisplatin/5FU OR
  - Cisplatin/Capecitabine

**YES**

- Recurrence

Palliative Chemotherapy Options
Treatment of Gastric Carcinoma

Clinical presentation and MDT - Is patient suitable for radical treatment?

- **NO**
  - T1 N0
    - Surgery then Follow up

- **YES**
  - T2 N0 +
    - Is patient suitable for neo-adjuvant therapy?
      - **NO**
        - Surgery
      - **YES**
        - Neo-adjuvant ECX- 3 cycles
          - Surgery
          - Adjuvant ECX- 3 cycles

Adjuvant Chemotherapy
- ECX OR FOLFOX

Adjuvant chemoradiation
- Continuous 5-Fluorouracil IV 200mg/m²/day usually for 5 weeks
  OR
- Capecitabine Orally
  625-825mg/m² BD for 5 weeks

Recurrence

Palliative management
Appendix B: Chemotherapy Protocols

Please note: Dose reductions to chemotherapy drugs in the protocols will be applied as described in the North London Cancer Network “Dosage Adjustment for Cytotoxics in Hepatic Impairment-January 2009” and Dose Adjustment for Cytotoxics in Renal Impairment-January 2009”

Antiemetics are given with the protocols below following the Pan London Anti-emetic Guidelines 2010 written by Pinkie Chambers and Susanna Daniels.

**Adenocarcinoma and Squamous Cell Carcinoma of the Oesophagus**

**Cisplatin/5FU- Neo-adjuvant for Adenocarcinoma, First line treatment for SCC**
Cisplatin 75-80mg/m2 IVI on day 1
5-Fluorouracil 1000mg/m2/day IVI on days 1 to 4
Repeat every 21 days for 2 or 3 cycles
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**Cisplatin/Capecitabine-Neo-adjuvant for Adenocarcinoma, First line treatment for SCC**
Cisplatin 75-80mg/m2 IVI on day 1
Capecitabine 600mg/m2 PO days 1 to 21
Repeat every 21 days for 2 or 3 cycles
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**ECX- Neoadjuvant and Adjuvant as per MAGIC Study**
Epirubicin 50mg/m2 IVB day 1
Cisplatin 60mg/m2 IVI day 1
Capecitabine 625mg/m2 PO BD days 1 to 21
Repeated every 21 days
For 3 cycles before surgery then 3 cycles post re-section
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**ECX- Adjuvant**
Epirubicin 50mg/m2 IVB day 1
Cisplatin 60mg/m2 IVI day 1
Capecitabine 625mg/m2 PO BD days 1 to 21
Repeated every 21 days for up to 6 cycles
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**Gastro-Oesophageal Junction**

**Paclitaxel and Carboplatin-Neo-adjuvant Chemoradiotherapy as per CROSS Study**
Paclitaxel 50mg/m2 IVI on Day 1, 8, 15, 22 and D29
Carboplatin AUC2 IVI on Day 1, 8, 15, 22 and D29
Radiotherapy: Total radiation dose= 41.4 Gy
Given in 23 fractions of 1.8 Gy each, with 5 fractions administered per week
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1, Day 8, D15, D22 and D29

**Gastric**

**ECX-Neo-adjuvant and adjuvant**
Epirubicin 50mg/m2 IVB day 1
Cisplatin 60mg/m2 IVI day 1
Capecitabine 625mg/m2 PO BD days 1 to 21
Repeated every 21 days
For 3 cycles before surgery then 3 cycles post re-section
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**Continuous 5FU- Adjuvant Chemoradiation**
Fluorouracil IVI 200mg/m²/day i.e. Fluorouracil 1400mg/m
Continued for a total of 5 weeks
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**Capecitabine- Adjuvant Chemoradiation**
Capecitabine 625-825mg/m² PO BD for 5 weeks
**Supportive Care:** Loperamide
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**FOLFOX**
Oxaliplatin 85mg/m² IVI on day 1
Calcium folinate 350mg IVI on day 1
5-Fluorouracil 400mg/m² IVI on day 1
5-Fluorouracil 2400mg/m² IVI on day 1 over 46 hrs
Repeated every 14 days x 12 cycles
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**Palliative Chemotherapy Options for OG Cancers**

**ECX-Palliative**
Epirubicin 50mg/m² IVB day 1
Cisplatin 60mg/m² IVI day 1
Capecitabine 625mg/m² PO BD days 1 to 21
Repeated every 21 days for up to 6 cycles
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**EOX-Palliative**
Epirubicin 50mg/m² IVB day 1
Oxaliplatin 130mg/m² IVI day 1
Capecitabine 625mg/m² PO BD days 1 to 21
Repeat every 21 days for up to 6 cycles
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1

**Trastuzumab/Cisplatin/Fluorouracil-Palliative**
Cisplatin 80mg/m² IVI day 1
5 Fluorouracil 800mg/m² IVI over 24 hours on days 1-5
Repeated every 21 days for 6 cycles
Trastuzumab 8mg/kg IVI on day 1 (cycle 1 only)
Trastuzumab 6mg/kg IVI on day 1 (for subsequent cycles)
Repeated every 21 days until progression
**Tests:** FBC, Urea and Electrolytes, Liver Function tests on Day 1 for cycles 1-6
Note: Baseline LVEF should be ≥ 50%; this must be assessed prior to treatment with Trastuzumab.
Cardiac monitoring 3 monthly by ECHO or MUGA scan should be performed. An algorithm for dealing with falls in LVEF can be found in Breast pathway board guidelines.

**Trastuzumab/Cisplatin/Capecitabine-Palliative**
Cisplatin 80mg/m² IVI day 1
Capecitabine 1000mg/m² PO BD days 1 to 14
Repeated every 21 days for 6 cycles
Trastuzumab 8mg/kg IVI on day 1 (cycle 1 only)
Trastuzumab 6mg/kg IVI on day 1 (for subsequent cycles)
Repeated every 21 days until progression
Tests: FBC, Urea and Electrolytes, Liver Function tests on Day 1 for cycles 1-6
Note: Baseline LVEF should be ≥ 50%; this must be assessed prior to treatment with Trastuzumab. Cardiac monitoring 3 monthly by ECHO or MUGA scan should be performed. An algorithm for dealing with falls in LVEF can be found in Breast pathway board guidelines.

Single Agent Irinotecan- Palliative
Cycle 1: Irinotecan 250mg/m2 IVI on Day 1
Cycle 2 onwards: Irinotecan 350mg/m2 IVI on day 1 if tolerated
Repeat every 21 days for up to 6 cycles
Tests: FBC, Urea and Electrolytes, Liver Function tests on Day 1
Supportive Care: Loperamide 2mg taken at first sign of loose stool then every 2 hour until diarrhoea free, ciprofloxacin 500mg twice daily for 5 days may be prescribed for protracted diarrhoea

Weekly Paclitaxel-Palliative
Paclitaxel 80mg/m2 IVI on days 1, 8 & 15
Repeat every 28 days until progression
Tests: FBC, Urea and Electrolytes, Liver Function tests on Day 1, Day 8, Day 15

FOLFIRI-Palliative
Irinotecan 180mg/m2 IVI on day 1
Calcium folinate 350mg IVI on day 1
5-Fluorouracil 400mg/m2 IVI on day 1
5-Fluorouracil 2400mg/m2 IVI on day 1 over 46 hrs
Repeated every 14 days for up to 12 cycles
Tests: FBC, Urea and Electrolytes, Liver Function tests on Day 1
5. References