

**Guideline for the Management of Chemotherapy Induced Diarrhoea in Adult Patients**

<b>Date Approved by Network Governance</b>	<b>June 2012</b>
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<b>Date for Review</b>	<b>June 2015</b>
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**ENDORSED BY GOVERNANCE COMMITTEE**

## 1. Scope of the guideline

This guideline has been produced to support the management of diarrhoea in adult patients receiving anti-cancer treatment.

## 2. Guideline background

- 2.1 Patients receiving chemotherapy are at high risk of developing diarrhoea. This risk can be as high as 45% with chemotherapeutic agents such as irinotecan and 5-fluorouracil. This is an unpleasant side effect which will affect the quality of life of a patient and it is important that it is treated as effectively as possible.
- 2.2 Diarrhoea may also lead to delays in treatment, dose reduction or discontinuation of therapy and the potential for admission to hospital. There is also a small but significant incidence of mortality with chemotherapy-induced diarrhoea (CID). Hence it is essential that diarrhoea is treated effectively.
- 2.3 The combination of neutropenia and diarrhoea is potentially extremely serious and mortality risk is high for such a patient.
- 2.4 Aims of patient care
  - a) To minimise patient morbidity and reduce the risk of death associated with CID.
  - b) To encourage patient compliance with treatment through minimising and controlling CID.
  - c) To decrease the need for treatment related dose modification due to CID.
- 2.5 Objectives of patient care
  - a) To encourage prompt diagnosis and initiation of treatment of CID.
  - b) To maximise patient quality of life whilst on chemotherapy through treatment of CID.
  - c) To ensure patients receive an appropriate management strategy for their grade of CID.

## Guideline Statements

### 3. Classification of diarrhoea

- 3.1 Patients should be classified using the National Cancer Institute (NCI) criteria outlined below.
- 3.2 The grade of diarrhoea will affect the overall response to the toxicity such as dose delay or dose reduction. Toxicity is classed according to the NCI criteria (see table below)

### National Cancer Institute Classification of diarrhoea

Grades	0	1	2	3	4
Number of stools/day	Normal	2-3	4-6	7-9	>10
Stool	Normal	Loose	Nocturnal stools	Incontinence	Bloody Stool
Colostomy	Normal	Mild increase in watery colostomy output	Moderate increase in watery colostomy output (does not interfere with normal daily activity)	Severe increase in watery colostomy output (does not interfere with normal daily activity)	Requires intensive care (risk of haemodynamic collapse)
Symptom	-	-	Moderate cramping	Severe cramping	Need for parenteral fluid support

### 3.3 Risk factors

#### 3.3.1 Patient factors

- older age
- female gender
- lower performance status
- associated bowel pathology such as lactose intolerance
- presence of tumour in bowel

#### 3.3.2 Therapy related factors

- agent specific such as irinotecan
- weekly chemotherapy schedule
- infusional chemotherapy
- prior history of CID
- concomitant abdominal-pelvic radiation and chemotherapy

## 4. Management (see also Appendix 1)

- 4.1 CID can be a serious complaint and requires prompt assessment and management. Where neutropenia is suspected the Network guideline should be followed. [Guideline for the management of febrile neutropenia](#)
- 4.2 The patient should have a method of access to the chemotherapy team at all times.

- 4.3 Patients should be advised to report any of the following:
- fever associated with diarrhoea
  - abdominal cramps/pain/bloating (especially for patients receiving vinca alkaloids)
  - dizziness
  - blood in stools
  - inability to drink adequate amounts of fluid.
- 4.4 Patients should be advised to document the frequency and consistency of their stools and monitor their temperature regularly.
- 4.5 Other or concomitant causes should be ruled out. They include:
- medication such as laxatives and antacids
  - infections such as c.difficile
  - partial bowel obstruction
  - malabsorption such as with pancreatic cancer
  - faecal impaction
  - acute radiation reaction
  - diet high in fibre or lactose
- 4.6 Advice on dietary modification during diarrhoeal symptoms should be given.  
[Refer to Pan Birmingham Cancer Network Patient information titled “Diarrhoea? Dietary advice for adults having radiotherapy or chemotherapy”](#)
- This advice includes:
- Drink plenty of fluids to prevent dehydration.
  - Limit milk and lactose products temporarily to see if this improves symptoms.
  - Avoid high fibre foods such as high fibre cereals, wholemeal or granary breads, rice and pasta, dried fruit, seeds and nuts.
  - Avoid spicy, fried, greasy, fatty foods, raw vegetables, caffeine (tea, coffee, alcohol) and carbonated drinks.
  - Limit fruit and vegetables (2 portions per day), remove peel and skins and limit lentils and pulses (peas and beans).
  - Stop the use of laxatives.
- 4.7 Referral to a dietician should be considered.
- 4.8 Patients taking oral chemotherapy must be informed that if they develop diarrhoea which does not settle with loperamide then they must STOP taking oral chemotherapy and contact their department using the phone number provided on the alert card or their emergency phone number.

## 5. Medication

Medication can be used to control the symptoms of CID.

### 5.1 For Grade 1-2 diarrhoea

#### 5.1.1 *Loperamide*

- a) Loperamide should be used where grade 1 diarrhoea lasts more than 12 – 24 hours or immediately for grade 2 diarrhoea.
- b) Either standard dose or high dose loperamide can be prescribed. Patients who develop diarrhoea whilst already taking loperamide, or those who develop diarrhoea whilst on irinotecan should immediately start on high dose loperamide.
- c) **Standard dose:** 4 mg initially followed by 2 mg after each loose stool to a maximum 16 mg daily.
- d) If diarrhoea persists for more than 24 hours whilst taking standard dose loperamide patients should be commenced on high dose loperamide:
- e) **High dose:** 4 mg initially then 2 mg every 2 hours (4 mg every 4 hours at night).
- f) Continue loperamide for 12 hours after resolution of diarrhoea but for no more than 48 hours in total.

#### 5.1.2 *Codeine*

Codeine may be added at the discretion of the physician for grade 1 – 2.

**Dose** 30 – 60 mg four times daily

### 5.2 For grade 3-4 diarrhoea, or those for whom loperamide treatment for grade 1-2 is unsuccessful.

#### 5.2.1 *Octreotide*

- a) Where grade 1 and 2 diarrhoea lasts more than 24 hours despite the use of high dose loperamide then octreotide should be considered.
- b) Where a patient experiences grade 3 or 4 diarrhoea then octreotide is indicated and the patient should be hospitalised. The octreotide can usually be discontinued 24 hours after the end of the diarrhoea.

**Standard Dose** 100 – 150 mg subcutaneously THREE times daily

### 5.2.2 **Atropine**

Use in treatment of early diarrhoea (i.e those with the presence of an acute cholinergic reaction) with irinotecan – see 6.1).

### 5.2.3 **Antibiotics**

In the presence of neutropenia antibiotics should be considered (ciprofloxacin oral 500 mg twice daily) and where grade 1 to 2 diarrhoea has not resolved after 24 hours. Intravenous antibiotics may be required where patients are neutropenic and have grade 3 to 4 diarrhoea.

## 6. **Management of diarrhoea due to Irinotecan (see also appendix 2)**

### 6.1 Early diarrhoea

- a) Early diarrhoea with irinotecan starts during or within 24 hours of receiving the dose. It is part of an acute cholinergic reaction and is usually accompanied by symptoms such as sweating, blurred vision, the eyes and mouth start to water excessively and the patient feels dizzy and unwell.
- b) These symptoms can be controlled using a dose of 0.3 mg subcutaneous atropine. These symptoms can be prevented with future courses of chemotherapy by the administration of the atropine prior to the dose of irinotecan. A further 0.3 mg dose can be repeated if needed within the 24 hour period post irinotecan. Patients should not take their anti-diarrhoeal drugs (such as loperamide) within the first 24 hours but should seek a medical review with the potential for the second dose of atropine.

### 6.2 Delayed diarrhoea

- a) Delayed diarrhoea occurs more than 24 hours after the dose of irinotecan. The patient should inform their place of treatment and be commenced on:
  - high dose loperamide (4 mg immediately then 2 mg every 2 hours to continue until 12 hours after the last loose stool)
  - oral fluid and electrolyte replacement therapy
- b) Loperamide must not be taken for more than 48 hours due to the risk of paralytic ileus.
- c) A prophylactic broad spectrum antibiotic such as ciprofloxacin should be considered where diarrhoea persists longer than 24 hours.

## 7. **Management of diarrhoea due to Capecitabine**

- 7.1 The treatment of diarrhoea due to capecitabine would be as indicated in the general guidelines. The dose modifications recommended are given in table 2.

**Table 2: Capecitabine Dose Reduction Schedule (3-weekly Cycle or Continuous Treatment)**

Toxicity grades*	Dose changes within a treatment cycle	Dose adjustment for next cycle/dose (% of starting dose)
• <i>Grade 1</i>	Maintain dose level	Maintain dose level
• <i>Grade 2</i>		
– 1st appearance	Interrupt until resolved to grade 0-1	100%
– 2nd appearance		75%
– 3rd appearance		50%
– 4th appearance	Discontinue treatment permanently	Not applicable
• <i>Grade 3</i>		
– 1st appearance	Interrupt until resolved to grade 0-1	75%
– 2nd appearance		50%
– 3rd appearance	Discontinue treatment permanently	Not applicable
• <i>Grade 4</i>		
– 1st appearance	Discontinue permanently <i>or</i> If physician deems it to be in the patient's best interest to continue, interrupt until resolved to grade 0-1	50%
– 2nd appearance	Discontinue permanently	Not applicable

## 8. Patient information and counselling

8.1 All patients, and with their consent, their partners should be given access to appropriate written information during their investigation and treatment, and on diagnosis, should be given the opportunity to discuss their management with a clinical nurse specialist who is a member of the relevant MDT.

8.2 Access to psychological support will be available if required. All patients should undergo a holistic needs assessment and onward referral as required.

### Monitoring of the guideline

Adherence to the Network guidelines may from time to time be formally monitored.

All guidelines referred to in this document can be accessed via the following link:  
<http://www.birminghamcancer.nhs.uk/staff/clinical-guidelines/chemotherapy>

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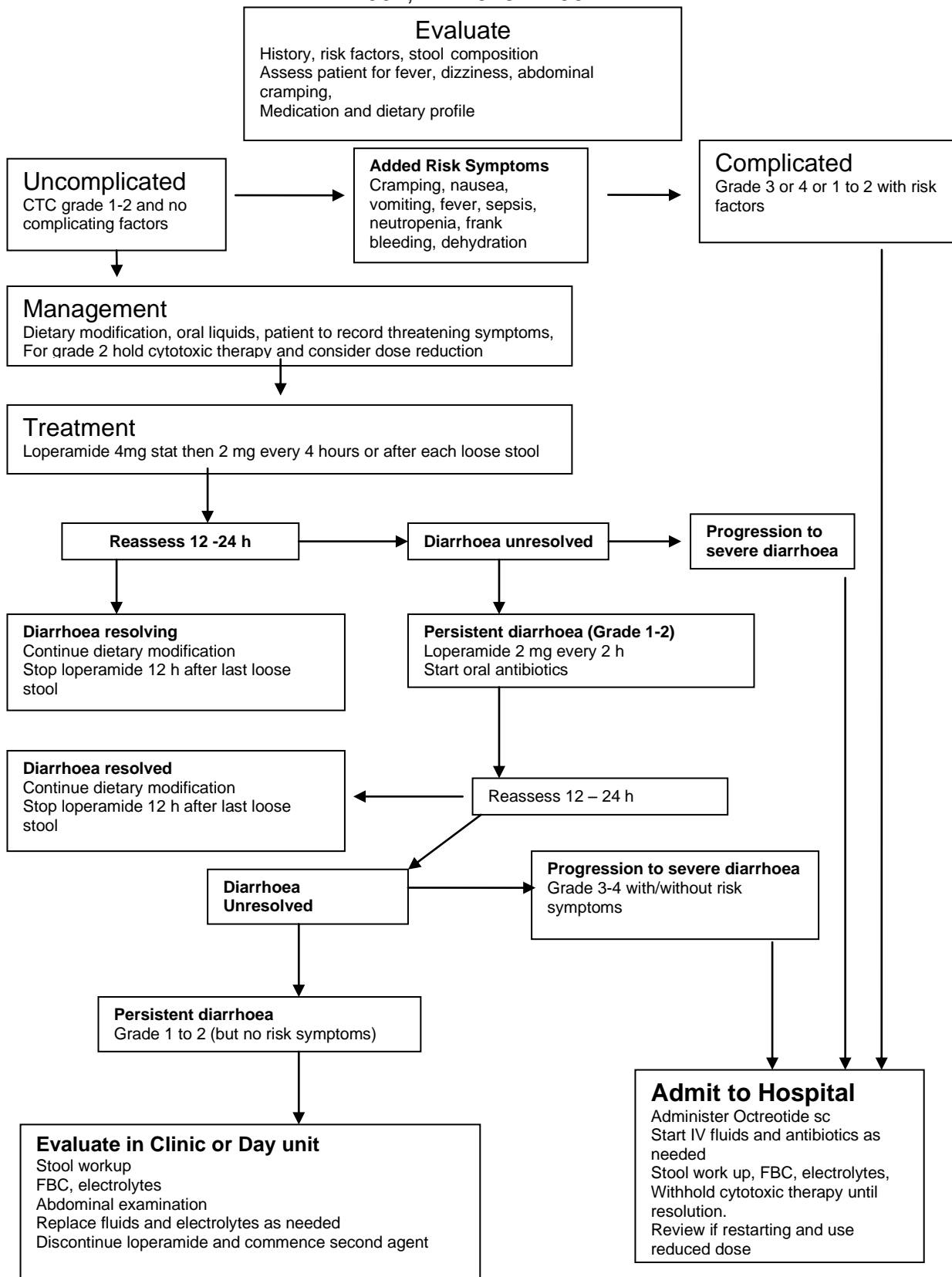
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Date: June 2012

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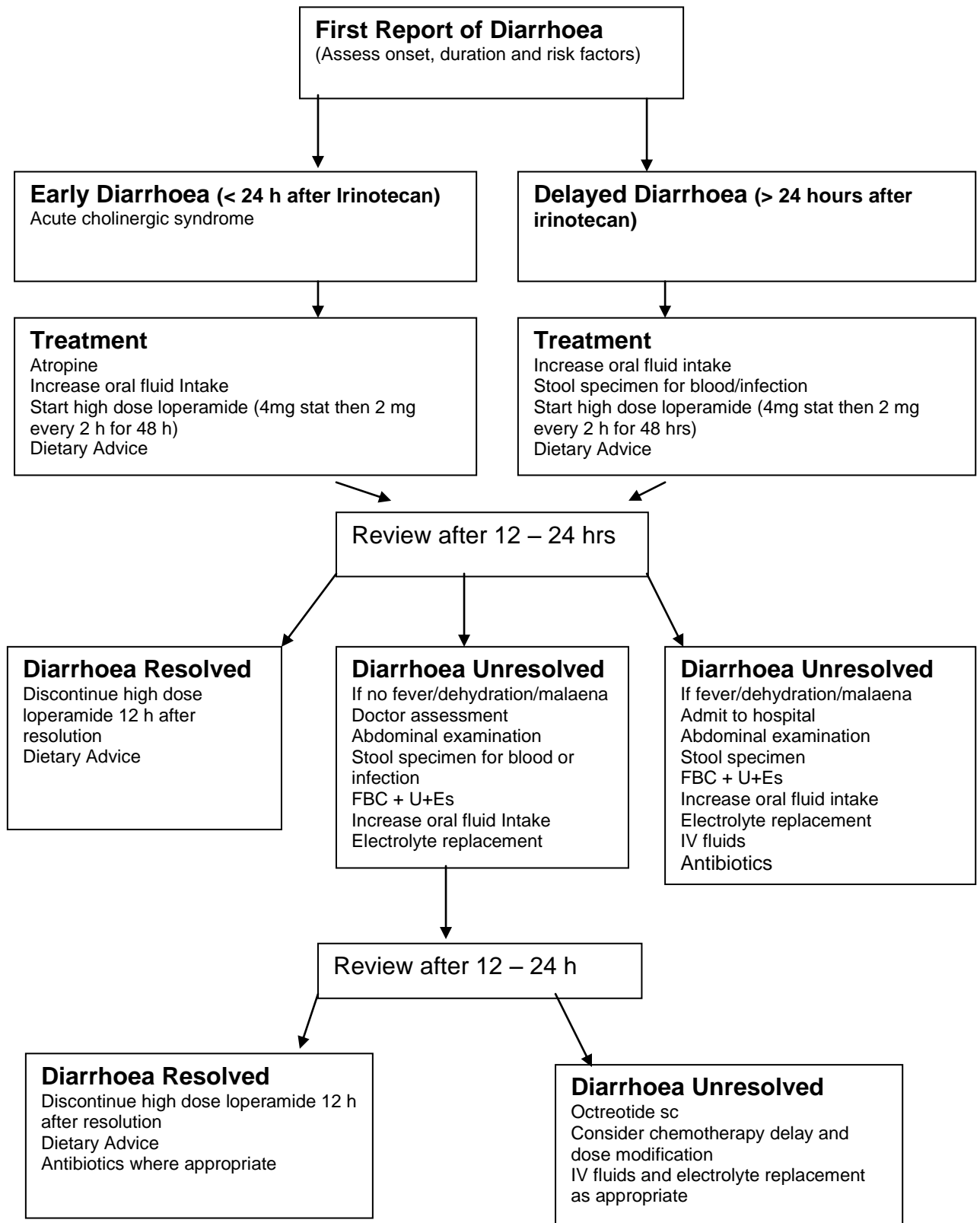


Appendix 1 - Algorithm based on recommendation from ASCO2003 (J Clin. Onc. 2004;22:2918 – 296



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Appendix 2 - Treatment algorithm for patients with irinotecan chemotherapy induced diarrhoea



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