

Chemotherapy Protocol

LUNG CANCER – NON-SMALL CELL (NSCLC)

NIVOLUMAB-PEMETREXED-CARBOPLATIN (AUC 5)

Regimen

- NSCLC – Nivolumab – Pemetrexed – Carboplatin (AUC 5)

Indication

- **Neoadjuvant treatment of resectable, non-squamous, non-small-cell lung cancer (NSCLC) who satisfy the following criteria (NICE TA876):**
 - Tumours ≥ 4 cm or node positive (stage IIA or IIB or IIIA or N2 only IIIB tumour according to the UICC/AJCC TNM 8th edition).
 - NEGATIVE for EGFR 19 or 21 mutation or an ALK gene fusion (NOT a requirement for squamous histology).
 - Potentially curative resection to proceed within 6 weeks of completing the final cycle of neoadjuvant nivolumab plus chemotherapy.
 - ECOG performance status (PS) of 0 or 1.
- **Following neoadjuvant SACT and successful resection:**
 - Adjuvant chemotherapy, radiotherapy or chemoradiotherapy is PERMITTED if indicated.
 - Adjuvant immunotherapy is NOT PERMITTED
- **During Neoadjuvant treatment:**
 - If disease progression occurs, then further immunotherapy is NOT funded IN ANY INDICATION.
 - If no disease progression but deemed not for surgical resection, further immunotherapy is ONLY PERMITTED following a disease response of at least 6 months (duration from last Nivolumab dose to progressive disease). UNLESS stage III disease and treated with concurrent chemoradiotherapy then potentially eligible for maintenance durvalumab

Toxicity

Drug	Adverse Effect
Carboplatin	Neutropenia, thrombocytopenia, peripheral neuropathy, nephrotoxicity at high doses, electrolyte disturbances
Nivolumab	Fatigue, rash, pruritis, pneumonitis, diarrhoea, nausea, electrolyte disturbances, endocrine disorders such as thyroid disorders, diabetes and adrenal insufficiency hepatitis and other immune-related adverse reactions.
Pemetrexed	Diarrhoea, skin reactions, neuropathy

The adverse effects listed are not exhaustive. Please refer to the relevant Summary of Product Characteristics for full details.

Monitoring

Disease

- A baseline chest x-ray should be performed before starting treatment and up to date (ideally within 1 month) cross section imaging should also be performed
- EGFR and ALK mutation status prior to starting treatment (cycle one)

Regimen

- FBC, LFTs and U&Es before each cycle
- Thyroid function tests prior to starting treatment and then before each administration (cycle) or when clinically indicated.
- Random blood glucose prior to each nivolumab dose
- Random blood cortisol at baseline then every 3-6 weeks
- A chest x-ray should be performed at baseline and when clinically indicated afterwards

Dose Modifications

The dose modifications listed are for haematological, liver and renal function only. Dose adjustments may be necessary for other toxicities as well.

In principle all dose reductions with chemotherapy due to adverse drug reactions should not be re-escalated in subsequent cycles without consultant approval. It is also a general rule for chemotherapy that if a third dose reduction is necessary treatment should be stopped.

Nivolumab belongs to the immunotherapy class of cancer treatments. Autoimmune toxicities are most frequently noted and can be life threatening. If autoimmune toxicities occur delaying treatment should be considered while investigations or treatments are organised. Some, but not all, toxicities mandate cessation of treatment. Nivolumab dose reductions are not permitted. Nivolumab treatment may be interrupted or discontinued due to toxicity.

Please discuss all dose reductions / delays with the relevant consultant before prescribing, if appropriate. The approach may be different depending on the clinical circumstances. The following is a general guide only.

Doses should be adjusted according to the table below;

Dose Level			
	0	-1	-2
Carboplatin	AUC 5	AUC 3.75	AUC 2.5
Pemetrexed	500mg/m ²	375 mg/m ²	250 mg/m ²

Haematology

Prior to prescribing each cycle, the following treatment criteria must be met:

Criteria	Eligible Level
Neutrophil	Greater than or equal to $1.0 \times 10^9/L$ (unless due to bone marrow impairment)
Platelets	Greater than or equal to $100 \times 10^9/L$ (unless due to bone marrow impairment)

If these parameters are not met, delay treatment for 1 week then resume at 100% dose if resolved. If 2 or more delays then reduce dose of carboplatin and pemetrexed by 1 level.

Consider blood transfusion or erythropoietin if patient symptomatic of anaemia or has a haemoglobin of less than 8g/dL (80g/L).

Hepatic Impairment

Drug	ALT/AST	Bilirubin	Recommendation
Carboplatin			No dose modification required
Pemetrexed	> 3 x ULN	> 1.5 x ULN	Clinical decision
Nivolumab			Clinical decision. See below for management of immune-mediated hepatitis

Renal Impairment

Drug	Creatinine Clearance (ml/min)	Dose (% of original dose)
Carboplatin	<20ml/min	Significant changes in GFR (of more than 10%) may require dose adjustment Do not administer if the CrCl is less than 20ml/min
Pemetrexed	<45ml/min	Consider dose reduction
Nivolumab	<30ml/min	Limited data, clinical decision. See below for the management of immune-mediated nephritis

Other toxicities

Carboplatin and Pemetrexed

	NCI CTC Grade	Carboplatin	Pemetrexed
		Dose Level	
Nausea and Vomiting	3 and above	0	0
Diarrhoea	3 and above	0	-1
Mucositis	3 and above	0	-2
Neurotoxicity	2	0	0
	3 and above	-1	-1
Transaminase	3	-1	-1
	4	Discontinue	Discontinue
Other	3 and above	-1	-1

Dose reductions or interruptions in therapy are not necessary for those toxicities that are considered unlikely to be serious or life threatening. For example, alopecia, altered taste or nail changes.

Nivolumab

Nivolumab is associated with inflammatory adverse reactions resulting from increased or excessive immune activity, likely to be related to its pharmacology.

Immune-related adverse reactions, which can be severe or life-threatening, may involve the gastrointestinal, liver, skin, nervous, endocrine, or other organ systems. Most occur during treatment, however, onset months after the last dose have been reported. Unless an alternate aetiology has been identified, diarrhoea, increased stool frequency, bloody stool, LFT elevations, rash and endocrinopathy must be considered inflammatory and nivolumab-related. Early diagnosis and appropriate management are essential to minimise life-threatening complications.

Nivolumab should be permanently discontinued for: any NCI-CTC grade 3 or 4 pneumonitis or hepatitis; any other life threatening NCI-CTC grade 4 reaction (including colitis and renal impairment); any recurrence of a severe or NCI-CTC grade 3 reaction; any persistent NCI-CTC grade 2 or 3 treatment-related adverse reaction that does not recover to grade 1 or resolve within 12 weeks after the last dose.

Nivolumab should be withheld for: any NCI-CTC grade 2 pneumonitis or hepatitis; any grade 2 or 3 colitis or renal impairment; any other severe or grade 3 treatment-related adverse reaction.

Immune-related adverse reaction	Severity	Treatment modification
Immune-related pneumonitis	Grade 2 pneumonitis	Withhold until symptoms resolve, radiographic abnormalities improve, and management with corticosteroids is complete
	Grade 3 or 4 pneumonitis	Permanently discontinue
Immune-related colitis	Grade 2 or 3 diarrhoea or colitis	Withhold until symptoms resolve and management with corticosteroids, if needed, is complete
	Grade 4 diarrhoea or colitis	Permanently discontinue
Immune-related hepatitis	Grade 2 elevation in aspartate aminotransferase (AST), alanine aminotransferase (ALT), or total bilirubin	Withhold until laboratory values return to baseline and management with corticosteroids, if needed, is complete
	Grade 3 or 4 elevation in AST, ALT, or total bilirubin	Permanently discontinue
Immune-related nephritis and renal dysfunction	Grade 2 or 3 creatinine elevation	Withhold until creatinine returns to baseline and management with corticosteroids is complete
	Grade 4 creatinine elevation	Permanently discontinue
Immune-related	Symptomatic endocrinopathies	Withhold until symptoms resolve and

endocrinopathies	(including hypothyroidism, hyperthyroidism, hypophysitis, adrenal insufficiency and diabetes)	management with corticosteroids (if needed for symptoms of acute inflammation) is complete. Nivolumab should be continued in the presence of hormone replacement therapy as long as no symptoms are present
Immune-related rash	Grade 3 rash	Withhold dose until symptoms resolve and management with corticosteroids is complete
	Grade 4 rash	Permanently discontinue

Do not resume nivolumab if the patient is still receiving immunosuppressive doses of corticosteroids or other immunosuppressive therapy.

Treatment with nivolumab should be permanently discontinued for grade 2 or 3 immune-related adverse reactions that persist inspite of treatment modifications or a reduction of corticosteroid dose to 10mg prednisolone, or equivalent, cannot be achieved.

Hepatic Impairment

For patients with pre-existing mild hepatic impairment no dose adjustment is recommended. Nivolumab has not been studied in patients with moderate or severe hepatic impairment.

For a hepatitis associated with an AST / ALT of 3-5xULN and / or a total bilirubin of 1.5-3xULN then withhold treatment and administer corticosteroids. Upon improvement to NCI-CTC grade 1 hepatic injury begin to taper the corticosteroid over a period of one month. The nivolumab may be re-started when the liver function remains at NCI-CTC grade 1 following corticosteroid taper.

The nivolumab should be permanently discontinued when the hepatic injury does not improve to at least NCI-CTC grade 1 within 12 weeks of the last dose, the corticosteroid dose cannot be reduced to 10mg or less of prednisolone or equivalent per day within 12 weeks or any NCI-CTC grade 3 or above reaction.

Nivolumab should be permanently discontinued in the first instance when hepatitis develops that is associated with an AST / ALT equal to or greater than 5xULN or where the bilirubin is greater than 3xULN.

Renal Impairment

No dose adjustment is required in patients with pre-existing mild or moderate renal impairment. Data from patients with severe renal impairment are too limited to draw conclusions on this population.

Severe nephritis or renal dysfunction has been observed with nivolumab treatment. Patients should be monitored for signs and symptoms of nephritis and renal dysfunction. Most patients present with asymptomatic increases in serum creatinine. Disease-related aetiologies should be ruled out.

For NCI-CTC Grade 2 or 3 serum creatinine elevation, nivolumab should be withheld and corticosteroids initiated. Upon improvement to NCI-CTC grade 1 initiate corticosteroid taper

over at least one month. Nivolumab may be resumed when the reaction remains at NCI-CTC grade 1 or below following tapering of the corticosteroid.

The nivolumab should be permanently discontinued when the serum creatinine does not improve to at least NCI-CTC grade 1 within 12 weeks of the last dose, the corticosteroid dose cannot be reduced to 10mg or less of prednisolone or equivalent per day within 12 weeks or in the case of a recurrent NCI-CTC grade 3 reaction.

For NCI-CTC Grade 4 serum creatinine elevation, nivolumab must be permanently discontinued, and corticosteroids should be initiated at a dose of 1 to 2 mg/kg/day methylprednisolone equivalents.

Endocrine

Nivolumab can cause inflammation of the endocrine system organs, specifically hypophysitis, hypopituitarism, adrenal insufficiency, and hypothyroidism. This may present with nonspecific symptoms resembling other causes such as brain metastasis or underlying disease.

Isolated hypothyroidism can be managed with replacement therapy, without treatment interruption or corticosteroids.

If there are any signs of adrenal crisis such as severe dehydration, hypotension, or shock, immediate administration of intravenous corticosteroids with mineralocorticoid activity is recommended, the patient must be evaluated for presence of sepsis or infections. If there are signs of adrenal insufficiency but the patient is not in crisis, further investigations should be considered including laboratory and imaging assessment. Evaluation of laboratory results to assess endocrine function may be performed before corticosteroid therapy is initiated. If pituitary imaging or laboratory tests of endocrine function are abnormal, a short course of high-dose corticosteroid therapy is recommended to treat the gland inflammation. The scheduled dose of nivolumab should be omitted. It is currently unknown if the corticosteroid treatment reverses the gland dysfunction. Appropriate hormone replacement should also be initiated. Long-term hormone replacement therapy may be necessary.

Once symptoms or laboratory abnormalities are controlled and overall patient improvement is evident, treatment with nivolumab may be resumed and initiation of corticosteroid taper should be based on clinical judgment.

Hypophysitis can present as a diffuse, heterogenous enlargement of the pituitary on a brain MRI but can be completely normal. When hypophysitis with pituitary dysfunction is suspected, blood tests including thyroid stimulating hormone (TSH), free T4, adrenocorticotrophic stimulating hormone (ACTH), cortisol, luteinising hormone (LH), and follicle-stimulating hormone (FSH) should be obtained in women, and the first four plus testosterone in men. Typically the anterior pituitary axis is involved, affecting thyroid, gonadal, and adrenal function, but isolated axis dysfunction can be seen. Hypophysitis will cause low free T4 as well as TSH. Hypophysitis with clinically significant adrenal insufficiency and hypotension, dehydration, and electrolyte abnormalities such as hyponatremia and hyperkalemia constitutes adrenal crisis. Hospitalization and intravenous steroids with mineralocorticoid activity, such as methylprednisolone, should be initiated while waiting for laboratory results. Cases should be jointly managed with an endocrinologist. Infection and sepsis should be ruled out with appropriate cultures and imaging. Prednisolone 1 mg/kg by mouth should be administered if patients are clinically stable. Steroids can usually be tapered over 30 days to achieve physiologic replacement levels. Thyroid hormone and/or testosterone replacement therapy may not be permanent, as the need for those hormones may wane over months in some patients. Cortisone replacement may also not be permanent in a modest portion of patients.

Gastrointestinal

Gastro-intestinal immune reactions include diarrhoea, increased frequency of bowel movements, abdominal pain or haematochezia, with or without fever. Diarrhoea or colitis occurring after initiation of nivolumab must be promptly evaluated to exclude infectious or other alternate causes. Immune-related colitis is often associated with evidence of mucosal inflammation, with or without ulcerations and lymphocytic and neutrophilic infiltration.

NCI-CTC grade 1 diarrhoea or suspected mild colitis may continue on nivolumab. Symptomatic treatment and close monitoring are advised.

For a NCI-CTC grade 2 - 3 diarrhoea or colitis withhold the nivolumab and administer corticosteroids. Upon improvement to NCI-CTC grade 1 begin to taper the corticosteroid over a period of one month. The nivolumab may be re-started when the diarrhoea or colitis remains at NCI-CTC grade 1 following corticosteroid taper.

The nivolumab should be permanently discontinued when the diarrhoea or colitis does not improve to at least NCI-CTC grade 1 within 12 weeks of the last dose, the corticosteroid dose cannot be reduced to 10mg or less of prednisolone or equivalent per day within 12 weeks or in the case of a recurrent NCI-CTC grade 3 reaction.

For Grade 4 diarrhoea or colitis, nivolumab must be permanently discontinued, and corticosteroid treatment initiated.

Lung

Interstitial lung disease including pneumonitis and acute interstitial pneumonitis are associated with nivolumab. For NCI-CTC grade 1 events (asymptomatic with radiographic findings only) then the nivolumab may be continued with close monitoring. Radiologic findings should be followed on serial imaging studies and consideration given to pulmonary consultation and/or bronchoscopy, if clinically indicated. For NCI-CTC grade 2 events withhold the nivolumab and consider pulmonary consultation with bronchoscopy and biopsy/bronchoalveolar lavage (BAL) and pulmonary function tests. Treat with systemic corticosteroids at a dose of 1 to 2 mg/kg/day prednisone or equivalent. When symptoms improve to NCI-CTC grade 1 or less, steroid taper should be started and continued over no less than 4 weeks. Treatment with nivolumab may be resumed if the event improves to NCI-CTC grade 0 or 1 within 12 weeks and corticosteroids have been reduced to the equivalent of prednisolone 10 mg oral daily or less. Repeat chest imaging monthly as clinically indicated.

Should a second episode of pneumonitis occur then discontinue nivolumab.

For NCI-CTC grade 3 or 4 events discontinue nivolumab and consider pulmonary function tests and seek advice from a lung specialist. A bronchoscopy with biopsy and / or BAL should be considered. Treatment involves corticosteroid therapy such as intravenous methylprednisolone 125mg. When symptoms improve to NCI-CTC grade 1 or less, a high dose oral steroid such as prednisone 1 to 2 mg/kg once per day can be considered. A reducing schedule should be considered over a period of at least four weeks. If intravenous corticosteroids followed by high dose oral corticosteroids do not reduce initial symptoms within 48 to 72 hours, treat with infliximab at 5 mg/kg once every 2 weeks. Discontinue infliximab upon symptom relief and initiate a prolonged steroid taper over 45 to 60 days. If symptoms worsen during steroid reduction, initiate a re-tapering of steroids starting at a higher dose followed by a more prolonged taper and administer infliximab.

Skin

Serious skin reactions include dermatitis exfoliative, erythema multiforme, Stevens-Johnson Syndrome and toxic epidermal necrolysis. Nivolumab can also be associated with pruritus, rash, (generalized and maculo-papular) and vitiligo. All attempts should be made to rule out other causes such as metastatic disease, infection or allergic dermatitis.

For NCI-CTC grade 1-2 skin reactions try symptomatic treatments such as topical corticosteroids or urea-containing creams in combination with oral antipruritics. Nivolumab can continue.

For NCI-CTC grade 3 or above events withhold nivolumab and consider a dermatology referral. Treatment with systemic corticosteroids such as prednisolone 1mg/kg each day may be necessary. When symptoms improve to NCI-CTC grade 1 or less then nivolumab may be restarted and steroid taper should be started and continued over no less than 4 weeks.

For NCI-CTC grade 4 or recurrent grade 3 reactions nivolumab should be permanently discontinued.

Regimen

The starting dose of carboplatin AUC 5 is used with calculated GFR. The recommended maximum dose when using a calculated creatinine clearance at AUC5 is 750mg (creatinine clearance 125ml/min). This is not a dose included in the national dose banding table, therefore a maximum dose has been set at 790mg in ARIA. Please check if this dose is appropriate. If you have an obese patient or an individual with a calculated creatinine clearance above 125ml/min please seek advice from the relevant consultant.

It should be noted that the dose of carboplatin may need to be altered if there is a change (improvement or reduction) in renal function of more than 10% from the previous cycle.

21 day cycle for 3 cycles

Drug	Dose	Days	Administration
Nivolumab	360mg	1	Intravenous infusion in 100ml sodium chloride 0.9% over 30 minutes
Carboplatin	AUC 5 (790mg maximum dose)	1	Intravenous infusion in 500ml glucose 5% over 60 minutes
Pemetrexed	500mg/m ²	1	Intravenous infusion in 100ml glucose 5% or sodium chloride 0.9% over 10 minutes

Dose Information

- Carboplatin will be dose banded in accordance with the national dose bands (10mg/ml)
- The maximum dose of carboplatin for AUC 5 is 750mg. This will be set as 790mg in ARIA to comply with national dose bands.
- It should be noted that the dose of carboplatin may need to be altered if there is a change (improvement or reduction) in renal function of more than 10% from the

previous cycle

- Pemetrexed will be dose banded in accordance with the national dose bands (25NS)
- Nivolumab is a flat dose. Doses are delayed, not reduced, for toxicity

Administration Information

- Carboplatin should be administered 30 minutes after the end of the pemetrexed infusion
- Nivolumab will be administered before the carboplatin and pemetrexed. It should be administered via a 0.2-1.2 micron a low protein binding filter. The polyethylene lined giving sets used for paclitaxel with a 0.22 micron filter are appropriate.
- Pemetrexed may be administered in 100ml of either glucose 5% or sodium chloride 0.9% over 10 minutes. The choice of fluid will be dependant on the product stocked by pharmacy. The fluid and volume will not appear in the prescription but can be located in the instructions notepad.

Extravasation

- Carboplatin – irritant
- Nivolumab - neutral
- Pemetrexed - inflammitant

Additional Therapy

- Folic acid 5mg once daily starting 1 – 2 weeks prior to and continuing for three weeks after the last dose of pemetrexed.
- Hydroxocobalamin intramuscular injection 1mg every three months starting 1 – 2 weeks prior to pemetrexed.
- Antiemetics

15-30 minutes prior to chemotherapy:

- ondansetron 8mg oral or intravenous

Ensure the patient has taken the oral dexamethasone starting the day before pemetrexed. On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg intravenous 15-30 minutes before chemotherapy.

As take home medication;

- dexamethasone 4mg twice a day oral for 3 days starting the day before chemotherapy is due.
- metoclopramide 10mg three times a day when required

- As required for the treatment of infusion related reactions (most common with Nivolumab);
 - chlorphenamine 10mg intravenous
 - hydrocortisone 100mg intravenous
 - paracetamol 1000mg oral
- Gastric protection with a proton pump inhibitor or a H₂ antagonist may be considered in patients considered at high risk of GI ulceration or bleed
- Prophylactic antibiotics can be considered if required

Additional Information

- Consideration should be given to draining pleural or peritoneal effusions prior to pemetrexed administration
- The use of systemic corticosteroids, before starting treatment with nivolumab should be avoided because of their potential interference with the pharmacodynamic activity and efficacy of the agent. However, systemic corticosteroids can be used after starting nivolumab to treat immune-related adverse reactions. The use of systemic corticosteroids after starting treatment does not appear to impair the efficacy of nivolumab.
- Patients must be given a nivolumab Patient Alert Card.

References

1. Forde PM, et al. CheckMate 816 Investigators. Neoadjuvant Nivolumab plus Chemotherapy in Resectable Lung Cancer. N Engl J Med. 2022 May 26;386(21):1973-1985. • Summary of Product Characteristics Cisplatin (Hospira) accessed via www.medicines.org.uk on 31 August 2023
2. Summary of Product Characteristics Pemetrexed (Lilly) accessed via www.medicines.org.uk on 31 August 2023
3. Summary of Product Characteristics Carboplatin (Hospira) accessed via www.medicines.org.uk on 31 August 2023
4. Summary of Product Characteristics Nivolumab (Bristol Myers Squibb) accessed via www.medicines.org.uk on 31 August 2023

REGIMEN SUMMARY

Nivolumab-Pemetrexed-Carboplatin (AUC5)

Cycle 1, 2, 3

Day Minus One

1. Dexamethasone 4mg twice a day oral*

Day One

2. Warning – Check dexamethasone dose

Administration Instructions

Ensure patient has taken the oral dexamethasone starting the day before pemetrexed. On the occasions where individuals attend for treatment and have forgotten to take the dexamethasone pre-medication administer dexamethasone 20mg intravenous 15-30 minutes before chemotherapy.

3. Ondansetron 8mg oral or intravenous

Administration Instructions

Administer 15-30 minutes prior to SACT. Administer ondansetron 8mg intravenous if required

4. Nivolumab 360mg intravenous infusion in 100ml sodium chloride 0.9% over 30 minutes

Administration Instructions

Nivolumab should be administered using a low protein binding filter. Ensure the patient has been given a nivolumab patient alert card.

5. Pemetrexed 500mg/m² intravenous infusion in 100ml glucose 5% or sodium chloride 0.9% over 10 minutes

6. Warning - Carboplatin Maximum Dose

Administration Instructions

The dose of carboplatin is capped at a creatinine clearance of 125ml/min. The internationally recommended maximum dose of carboplatin for AUC 5 is 750mg. The national dose bands do not contain this dose so the cap has been set at 790mg in ARIA. Please check this dose is appropriate for your patient.

7. Carboplatin AUC 5 (maximum dose 790mg) intravenous infusion in 500ml glucose 5% over 60 minutes

Administration Instructions

Start 30 minutes after the end of the pemetrexed infusion.

8. Chlorphenamine 10mg intravenous when required for the treatment of infusion related reactions

9. Hydrocortisone sodium succinate 100mg intravenous when required for the treatment of infusion related reactions

10. Paracetamol 1000mg oral when required for the relief of infusion related reactions

Administration Instructions

Please check if the patient has taken paracetamol. Maximum dose is 4g per 24 hours. There should be 4 hours between doses

Take Home Medicines

11. Dexamethasone 4mg twice a day oral for 3 days starting the day before the next pemetrexed infusion*

12. Metoclopramide 10mg three times a day when required oral

Administration Instructions

Please supply 28 tablets or an original pack as appropriate

13. Folic acid 5mg once daily oral for 21 days

Please supply 28 tablets or an original pack as appropriate

Hydroxocobalamin will not be included as part of the Aria regime and must be prescribed separately on the cycle for which it is due.

* In Aria Planner the dexamethasone 4mg twice daily will appear on days 1, 2, 3 of treatment. This is the supply for the next cycle. The patient should have been given the supply for cycle one in the pre-assessment or consent clinic. The administration instructions reflect this.

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1.0	Jan 2026	New Protocol	Alexandre Guedes	Dr Luke Nolan

This chemotherapy protocol has been developed as part of the chemotherapy electronic prescribing project. This was and remains a collaborative project that originated from the former CSCCN. These documents have been approved on behalf of the following Trusts;

Hampshire Hospitals NHS Foundation Trust
 NHS Isle of Wight
 Portsmouth Hospitals NHS Trust
 Salisbury Hospitals NHS Foundation Trust
 University Hospital Southampton NHS Foundation Trust
 Western Sussex Hospitals NHS Foundation Trust

All actions have been taken to ensure these protocols are correct. However, no responsibility can be taken for errors that occur as a result of following these guidelines. These protocols should be used in conjunction with other references such as the Summary of Product Characteristics and relevant published papers.