Oncology Treatment Protocol Plan

Non-Small Cell Lung Cancer (NSCLC) — Stage IIIA

Carboplatin + Paclitaxel Chemotherapy · Concurrent Thoracic Radiation

Approved: 14 Jan 2025 Revision: 2.1 Next Review: 14 Jul 2025

PROTOCOL REFERENCE SHEET — MERIDIAN ONCOLOGY CENTRE — MOC-2025-NSCLC-004

Patient Information

Name:	Eleanor Margaret Osei
DOB:	17 March 1963
MRN:	MOC-2025-08841
Sex:	Female
Weight:	68 kg | Height: 164 cm
BSA:	1.74 m^2 (Mosteller)
ECOG PS:	1
Allergies:	Sulfonamides
Diagnosis:	NSCLC, Adenocarcinoma
Stage:	IIIA (T3N2M0)
Biomarkers:	$EGFR^-$, ALK^-, PD-L1: 35%

Multidisciplinary Team

Medical Oncologist:	Dr. Samuel Adeyemi, MD
Radiation Oncologist:	Dr. Priya Nair, MD, FRCR
Pulmonologist:	Dr. Thomas Bergmann
Pharmacist:	Claire Fontaine, PharmD
Oncology Nurse:	Beatrice Okafor, RN
MDT Date:	10 Jan 2025
Institution:	Meridian Oncology Centre
Department:	Thoracic Oncology Unit
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Treatment Intent & Overview

INTENT	CYCLES	TOTAL DURATION
Curative	6 Cycles	18 Weeks
Concurrent CRT	21-day intervals	Chemo + RT

Chemotherapy Dosing Schedule

Regimen: Carboplatin + Paclitaxel (CarboTax)

Protocol: Carboplatin AUC 6 + Paclitaxel 200 mg/m^2 every 21 days (Q21D) × 6 cycles. Concurrent thoracic radiotherapy during Cycles 1 and 2.

Calculated Doses (BSA = 1.74 m^2; GFR = 82 mL/min):

Drug	Dose/m²	Calc. Dose	Route	Infusion Duration
Paclitaxel	200 mg/m²	348 mg	IV	3 hours
Carboplatin	AUC 6	528 mg	IV	30 minutes
Dexamethasone (pre-med)	20 mg fixed	20 mg	IV	15 minutes
Diphenhydramine (pre-med)	50 mg fixed	50 mg	IV	15 minutes
Ranitidine (pre-med)	50 mg fixed	50 mg	IV	15 minutes

Carboplatin AUC Calculation (Calvert):

$$\text{Dose (mg)} = \text{AUC} \times \left(\text{GFR} + 25\right) = 6 \times (82 + 25) = \mathbf{642\ mg}$$

Note: Capped at 1,000 mg maximum per institutional policy. Actual dispensed dose: 642 mg.

Cycle Calendar

Cycle	Start Date	Chemo Day	Paclitaxel	Carboplatin	Notes
1	20 Jan 2025	Day 1	348 mg	642 mg	Concurrent RT (wk 1–2)
2	10 Feb 2025	Day 22	348 mg	642 mg	Concurrent RT (wk 3–6)
3	03 Mar 2025	Day 43	348 mg	642 mg	Post-RT consolidation
4	24 Mar 2025	Day 64	348 mg	642 mg	Restaging CT after Cycle 4
5	14 Apr 2025	Day 85	348 mg	642 mg	Dose reduce if Grade ≥3 tox
6	05 May 2025	Day 106	348 mg	642 mg	Final cycle; end-of-tx imaging

Pre-medication Protocol

1. **Dexamethasone** 20 mg IV, 30 min pre-Paclitaxel
2. **Diphenhydramine** 50 mg IV, 30 min pre-Paclitaxel
3. **Ranitidine** 50 mg IV, 30 min pre-Paclitaxel
4. **Ondansetron** 8 mg IV, 30 min pre-chemo
5. **Dexamethasone** 8 mg PO BD × 3 days post-chemo
6. **Ondansetron** 8 mg PO TDS × 5 days post-chemo

Dose Modification Triggers

Toxicity	Action
ANC $< 1.5 \times 10^9$/L	Delay cycle 1 week
Plt $< 100 \times 10^9$/L	Delay; reduce Carboplatin 25%
Creatinine clearance < 45	Reduce Carboplatin to AUC 5
Grade ≥2 neuropathy	Reduce Paclitaxel 20%
Grade 3 nausea/vomiting	Add Aprepitant 125 mg D1

Radiation Therapy Protocol

Treatment Parameters

Modality:	External Beam RT (EBRT)
Technique:	IMRT / VMAT
Total Dose:	60 Gy
Fractionation:	30 fractions × 2 Gy/fx
Schedule:	5 days/week (Mon–Fri)
Duration:	6 weeks
Planning CT:	4D-CT with contrast
Immobilisation:	Thermoplastic shell + wing board
Image Guidance:	Daily CBCT
Planning System:	Apex PlanStation v8.3
Linac:	Meridian TrueBeam 2

Target Volume Definition

GTV:	Primary tumour (4.2 cm, RUL) + mediastinal nodes (4R, 7)
CTV:	GTV + 8 mm isotropic margin
ITV:	CTV + 4D-CT motion envelope
PTV:	ITV + 5 mm margin

OAR Dose Constraints:

Spinal Cord:	≤45 Gy max
Oesophagus:	Mean ≤ 34 Gy
Ipsilat. Lung:	V20 ≤ 35%
Contralat. Lung:	Mean ≤ 8 Gy
Heart:	V30 ≤ 46%
Brachial Plexus:	≤66 Gy max

Radiation Fraction Calendar (Weeks 1–6)

Week	Date Range	Fractions	Cum. Dose	Status	Comments
1	20–24 Jan	F1–F5	10 Gy	Concurrent	Coincides with Chemo Cycle 1
2	27–31 Jan	F6–F10	20 Gy	Concurrent	Weekly review OAR DVH
3	03–07 Feb	F11–F15	30 Gy	Concurrent	Oesophagitis monitoring
4	10–14 Feb	F16–F20	40 Gy	Concurrent	Coincides with Chemo Cycle 2
5	17–21 Feb	F21–F25	50 Gy	Boost Phase	Escalate if response confirmed
6	24–28 Feb	F26–F30	60 Gy	Boost Phase	End-of-RT imaging & assessment

Toxicity Monitoring & Supportive Care

Baseline & On-treatment Investigations

- Full Blood Count (FBC) – Day 1 each cycle & Day 14
- Renal function (U&E, eGFR) – Day 1 each cycle
- Liver function tests – Day 1 cycles 1, 3, 5
- Pulmonary function tests – Baseline, post-RT, 6 months
- ECG – Baseline and if symptomatic
- CT Chest + Abdomen – Baseline, after Cycle 4, end-of-tx
- PET-CT – Baseline; restaging at 3 months post-tx
- Peripheral neuropathy assessment – Each visit

Supportive Care Plan

- G-CSF (Filgrastim 300 mcg SC D3–D10) if ANC nadir < 0.5
- Proton pump inhibitor: Omeprazole 20 mg OD throughout
- Antifungal prophylaxis: Fluconazole 150 mg weekly
- Mouth care protocol: Chlorhexidine 0.2% rinse QDS
- Nutritional support: Dietitian referral if >5% weight loss
- Physiotherapy: Breathing exercises twice daily
- Psychological support: Oncology counsellor referral
- Smoking cessation: Varenicline 1 mg BD if applicable

CTCAE v5.0 Toxicity Grading Quick Reference

Toxicity	Grade 1	Grade 2	Grade 3	Grade 4
Neutropenia	ANC 1.5–LLN	ANC 1.0–1.5	ANC 0.5–1.0	ANC <0.5
Peripheral neuropathy	Asymp., reflexes	Mod. symptoms	Severe; ADL limited	Life-threatening
Oesophagitis	Asymp.; mild	Symp.; altered	Feeding tube req.	Life-threatening
Pneumonitis	Asymp.; imaging	Symp.; no O_2	O_2 required	Life-threatening
Alopecia	≤50% loss	>50% loss	—	—
Fatigue	Mild	Moderate	Severe; ADL limited	—
Nausea	Loss of appetite	Decreased PO	Inadequate calories	Life-threatening

Response Assessment & Follow-up Plan

RECIST 1.1 Response Criteria

CR	Complete disappearance of all target lesions
PR	≥30% decrease in sum of diameters
SD	Between PR and PD criteria
PD	≥20% increase; new lesion

Imaging Schedule:

- CT thorax: after Cycle 4, end-of-treatment
- PET-CT: 3 months post-treatment
- Brain MRI: if neurological symptoms
- Bone scan: if bone pain

Survivorship Follow-up Schedule

Timepoint	Assessment
4 weeks post-tx	Toxicity review, FBC, CT
3 months	CT + PET, MDT discussion
6 months	CT thorax, PFTs, QoL
12 months	Annual CT, survivorship review
Every 6 months (yr 2–5)	CT thorax, clinical exam
Annually (yr >5)	Clinical exam, chest X-ray

If disease progression: MDT re-referral within 2 weeks. Consider EGFR/ALK re-biopsy for second-line therapy (Durvalumab consolidation if PD-L1 >1%).

Consent & Authorisation

Informed Consent: The patient (Eleanor Margaret Osei, MRN: MOC-2025-08841) has been counselled regarding the nature, intent, risks, and alternatives of the proposed concurrent chemoradiotherapy. Risks discussed include: myelosuppression, peripheral neuropathy, alopecia, radiation pneumonitis, oesophagitis, fatigue, and secondary malignancy. The patient has consented in writing. Consent form reference: MOC-CF-2025-08841-01.

Medical Oncologist:	**Radiation Oncologist:**	**Pharmacist Verification:**
Dr. Samuel Adeyemi	*Dr. Priya Nair*	*Claire Fontaine, PharmD*
Date: _____	*Date:* _____	*Date:* _____

This document is a treatment protocol plan generated at Meridian Oncology Centre, 14 Harley Place, London W1G 9PH. All clinical decisions must be verified by a qualified medical professional. For emergencies contact the 24-hour oncology helpline: 0800 946 0000.

Emergency Guidance for Patient & Carers

Seek immediate medical attention if:	Meridian Oncology Hotline:	Local A&E:
• Temperature ≥ 38 °C	**0800 946 0000**	St. Albans General Hospital
• Unusual bruising / bleeding	Available 24/7	Waverley Road, AL1 5DX
• Severe breathlessness	Email: urgent@meridian-onc.nhs.uk	Ref. team: Thoracic Oncology
• Severe chest pain / difficulty swallowing		