

NON-SMALL CELL LUNG CANCER

ADJUVANT THERAPY

CISPLATIN – VINORELBINE

Cisplatin	50 mg/m ²	IV*	Days 1 and 8
Vinorelbine	25 mg/m ² **	IV	Weekly for 16 weeks

*Administer with adequate hydration; **The protocol originally called for vinorelbine 30 mg/m², but was reduced due to hematologic toxicity in August 1995.

NOTE: Colony-stimulating factors were administered to 15% of patients.

Repeat cycle (cisplatin) every 28 days for 4 total cycles.

Reference: [Winton T, et al. *N Engl J Med* 2005;352:2589 – 97.](#)

NON-SMALL CELL LUNG CANCER

LOCALLY ADVANCED DISEASE

CARBOPLATIN – PACLITAXEL (WEEKLY) WITH RADIATION (LAMP)

Paclitaxel [‡]	45 mg/m ²	IV*	Day 1, 8, 15, 22, 29, 36, 42 and 49
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Followed by

Carboplatin	AUC 2**	IV***	Day 1, 8, 15, 22, 29, 36, 42 and 49
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Radiation	Thoracic radiation therapy administered concurrently with weekly chemotherapy. Radiation consists of 1.8 Gy daily, five times per week to 45 Gy with a boost to total radiation dose 63 Gy over 7 weeks (34 fractions).		
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[‡]Routine premedication administered; *Administer over 1 hour; **AUC calculated using the Calvert Formula (and Cockcroft and Gault for creatinine clearance); ***Administer over 30 minutes.

THEN, following a 3–4 week break

CONSOLIDATION

Paclitaxel [‡]	200 mg/m ²	IV*	Day 1
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Followed by

Carboplatin	AUC 6**	IV***	Day 1
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[‡]Routine premedication administered; *Administer over 3 hours; **AUC administered using the Calvert Formula (and Cockcroft and Gault for CrCL); ***Administer over 30 minutes.

Repeat consolidation cycle every 21 days for a total of 2 cycles.

Reference: [Belani CP, et al. J Clin Oncol 2005;23:5883 – 91.](#)

NON-SMALL CELL LUNG CANCER

UNRESECTABLE/ADVANCED DISEASE

CARBOPLATIN – PACLITAXEL

Paclitaxel‡	200 ¹ –225 ² mg/m ²	IV*	Day 1
		<i>Followed by</i>	
Carboplatin	AUC 6**	IV	Day 1

‡Routine premedication administered; *Administer over 3 hours; **AUC calculated using the Calvert Formula (and Cockcroft and Gault for CrCL).

Repeat cycle every 21 days.

References: ¹[Langer C, et al. / J Clin Oncol 2007;25:418 – 23](#); ²[Schiller JH, et al. N Engl J Med 2002;346:92 – 8](#).

CARBOPLATIN – PACLITAXEL – BEVACIZUMAB

Paclitaxel‡	200 mg/m ²	IV*	Day 1
		<i>Followed by</i>	
Carboplatin	AUC 6**	IV	Day 1
Bevacizumab	15 mg/kg	IV***	Day 1

‡Routine premedication administered; *Administer over 3 hours; **AUC calculated using the Calvert Formula (and Cockcroft and Gault for CrCL); ***Initial dose to be administered over 90 minutes. If the first infusion is well tolerated, the second infusion can be administered over 60 minutes. If that is well tolerated all subsequent infusions may be delivered over 30 minutes; If the patient experiences infusion associated adverse events while the bevacizumab is being administered, the patient may receive premedication on the next cycle.

NOTE: Continue bevacizumab monotherapy after 6 cycles of chemotherapy pending disease response. Use this regimen for non-squamous non-small cell lung cancer only. Very strict exclusion criteria including brain metastases, gross hemoptysis, concurrent anticoagulation, or regular daily aspirin use. See protocol for complete details.

Repeat cycle every 21 days to a maximum of 6 cycles.

Reference: [Sandler AB, et al. N Engl J Med 2006;355:2542 – 50](#).

CARBOPLATIN – PACLITAXEL (WEEKLY)

Paclitaxel‡	100 mg/m ²	IV	Days 1, 8 and 15
Carboplatin	AUC 6	IV	Day 1

‡Routine premedication administered.

NOTE: Patients with a CR, PR or SD were randomized to maintenance therapy with paclitaxel 70 mg/m² IV weekly for 3 out of every 4 weeks.

Repeat cycle every 28 days for 4 cycles.

Reference: [Belani CP, et al. J Clin Oncol 2003;21:2933 – 9](#).

CARBOPLATIN – PACLITAXEL – GEMCITABINE

Paclitaxel‡	200 mg/m ²	IV*	Day 1
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Followed by

Carboplatin	AUC 6	IV	Day 1
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Followed by

Gemcitabine	1000 mg/m ²	IV**	Days 1 and 8
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‡Routine premedication administered; *Administer over 3 hours; **Administer over 30 – 60 minutes.

NOTE: Prophylactic growth factor was not permitted. Growth factor support should be used in accordance with the current ASCO guidelines.

DOSE MODIFICATIONS: Treatment was interrupted for the following – when the CrCL fell below 60 mL/minute, allergic reactions, and neurologic toxicity greater than grade 2 and grade 4 non-hematologic toxicity (excluding alopecia).

Repeat cycle every 21 days for a minimum of 6 cycles.

Reference: [Paccagnella A, et al. J Clin Oncol 2006;24:681 – 7.](#)

CISPLATIN – DOCETAXEL

Docetaxel‡	60 – 75 mg/m ²	IV*	Day 1
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Followed by

Cisplatin	75 – 80 mg/m ²	IV**	Day 1
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‡Routine premedication administered; *Administer over 1 hour; **Administer over 2 hours with adequate pre- and post-hydration.

Repeat cycle every 21 – 28 days.

References: [Kubota K, et al. J Clin Oncol 2004;22:254 – 61](#); [Schiller JH, et al. N Engl J Med 2002;346:92 – 8.](#)

CISPLATIN – GEMCITABINE – BEVACIZUMAB

Cisplatin	80 mg/m ²	IV	Day 1
Gemcitabine	1250 mg/m ²	IV	Days 1 and 8
Bevacizumab	7.5 mg/kg	IV	Days 1, 8, and 15

Repeat cycle every 21 days.

Reference: [Manegold C, et al. J Clin Oncol 2007;25\(18S\). Abstract LBA7514.](#)

CISPLATIN – PACLITAXEL

Paclitaxel‡ 135 mg/m² CIVI* Day 1

Followed by

Cisplatin 75 mg/m² IV** Day 2

‡Routine premedication administered; *Administer as a continuous infusion over 24 hours;

**Administer over 60 minutes with adequate pre- and post-hydration.

Repeat cycle every 21 days.

References: [Schiller JH, et al. *N Engl J Med* 2002; 346:92 – 8;](#) [Bonomi P, et al. *J Clin Oncol* 2000;18:623 – 31.](#)

DOCETAXEL – ELDERLY (≥ 70 YEARS)

Docetaxel‡ 60 mg/m² IV* Day 1

‡Routine premedication administered; *Administer over 1 hour.

Repeat cycle every 21 days for 4 cycles.

Reference: [Kudoh S, et al. *J Clin Oncol* 2006;24:3657 – 63.](#)

DOCETAXEL

Docetaxel‡ 75 mg/m² IV* Day 1

‡Routine premedication administered; *Administer over 1 hour.

Repeat cycle every 21 days until disease progression/unacceptable toxicity.

NOTE: Original protocol in second-line therapy excluded patients with brain metastases or who received prior paclitaxel.

References: [Shepherd FA, et al. *J Clin Oncol* 2000;18:2095 – 103;](#) [Hanna N, et al. *J Clin Oncol* 2004;22:1589 – 97;](#) [Schuette W, et al. *J Clin Oncol* 2005;23:8389 – 95;](#) [Ramlau R, et al. *J Clin Oncol* 2006;24:2800 – 7.](#)

DOCETAXEL (WEEKLY)

Docetaxel‡ 35 mg/m²/week IV* Days 1, 8 and 15

‡Routine premedication administered; *Administer over 1 hour.

Repeat cycle every 28 days for a maximum of 8 cycles.

Reference: [Schuette W, et al. *J Clin Oncol* 2005;23:8389 – 95.](#)

DOCETAXEL – VINORELBINE

Vinorelbine	45 mg/m ²	IV*	Day 1
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Followed immediately by

Docetaxel‡	60 mg/m ²	IV**	Day 1
Filgrastim	5 micrograms/kg/day	SQ	Day 3 until ANC recovery

‡Routine premedication administered; *Administer over 6 – 10 minutes; **Administer over 1 hour.

Repeat cycle every 14 days.

NOTE: Antibacterial prophylaxis administered.

Reference: [Miller VA, et al. J Clin Oncol 2000;18:1346 - 50.](#)

EP (ETOPOSIDE – CISPLATIN)

Etoposide	100 mg/m ² /day	IV*	Days 1 – 3
Cisplatin	120 mg/m ²	IV**	Day 1

*Administer over 1 hour; **Administer over 15 – 20 minutes with routine pre- and post-hydration.

Repeat cycle every 21 – 28 days. Responding patients were continued until disease progression or no further response during two successive cycles. Stable disease discontinued therapy after 3 cycles.

Reference: [Klastersky J, et al. J Clin Oncol 1990;8:1556 - 62.](#)

ERLOTINIB

Erlotinib	150 mg/day	PO*	Daily
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*Take 1 hour before or 2 hours after ingestion of food.

NOTE: Available as 25 mg, 100 mg, and 150 mg tablets.

Reference: Genentech/OSI Oncology Package Insert; [Shepherd FA, et al. N Engl J Med 2005;353:123 - 32.](#)

GEFITINIB

Gefitinib	500 mg	PO	Daily
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NOTE: Use this schedule and dose for bronchioloalveolar carcinoma (BAC) ONLY.

Reference: [West HL, et al. J Clin Oncol 2006;24:1807 - 13.](#)

GEMCITABINE

Gemcitabine	1200 mg/m ²	IV	Days 1 and 8
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Repeat cycle every 21 days for a maximum of 6 cycles.

Reference: [Gridelli C, et al. J Natl Cancer Inst 2003;95:362 - 72.](#)

GEMCITABINE – CARBOPLATIN

Gemcitabine	1200 mg/m ²	IV*	Days 1 and 8
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Followed by

Carboplatin	AUC 5**	IV*	Day 1
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*Administer over 30 minutes; **AUC calculated using Calvert formula.

NOTE: All patients received prophylactic trimethoprim from days 8 to day 21. Doses of carboplatin and gemcitabine were reduced by 50% if CrCL was 40 – 60 mL/minute.

Repeat cycle every 21 days for 4 cycles.

Reference: [Rudd RM, et al. *J Clin Oncol* 2005;23:142 – 53.](#)

GEMCITABINE – CISPLATIN

Gemcitabine	1000 mg/m ²	IV*	Days 1 and 8
Cisplatin	60 mg/m ²	IV**	Day 1

*Administer over 30 minutes; **Administer over 1 hour with routine pre- and post-hydration.

Repeat cycle every 21 days for up to 6 cycles, or until disease progression or unacceptable toxicity.

Reference: [Langer C, et al. *J Clin Oncol* 2007;25:418 – 23.](#)

GEMCITABINE – CISPLATIN

Gemcitabine	1000 mg/m ²	IV*	Days 1, 8 and 15
Cisplatin	100 mg/m ²	IV**	Day 1 or 2

*Administered over 30 minutes; **Administer over 30 – 120 minutes with routine pre- and post-hydration.

NOTE: †Doses of cisplatin and gemcitabine were reduced by 50% if CrCL was 40 – 60 mL/minute.

Repeat cycle every 28 days.

References: [Schiller JH, et al. *N Engl J Med* 2002;346:92 – 8](#); [Crino L, et al. *J Clin Oncol* 1997;15:297–303](#); [Sandler AB, et al. *J Clin Oncol* 2000;18:122 – 30](#); [†Van Zandwijk N, et al. *J Clin Oncol* 2000;18:2658 – 64](#)

PACLITAXEL

Paclitaxel‡	200 mg/m ²	IV*	Day 1
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‡Routine premedication administered; *Administer over 3 hours.

Repeat cycle every 21 days.

Reference: [Ranson M, et al. *J Natl Cancer Inst* 2000;92:1074 – 80.](#)

PACLITAXEL – GEMCITABINE

Paclitaxel‡	200 mg/m ²	IV*	Day 1
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Followed by

Gemcitabine	1000 mg/m ²	IV**	Days 1 and 8
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‡Routine premedication administered; *Administer over 3 hours; **Administer over 30 minutes.

Repeat cycle every 21 days for a maximum of 6 cycles.

Reference: [Kosmidis P, et al. J Clin Oncol 2002;20:3578 – 85.](#)

PEMETREXED

Pemetrexed	500 mg/m ²	IV*	Day 1
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*Administer over 10 minutes.

NOTE: Premedication with oral dexamethasone 4 mg twice daily for 3 days, beginning the day prior to the dose of pemetrexed, has significantly reduced the incidence and severity of rash.

Folic acid (dose 350 micrograms to 1 mg PO daily) and vitamin B₁₂ (1000 to 1500 micrograms IM every 9 weeks) supplementation should be prescribed 1 – 2 weeks before starting the first dose of pemetrexed.

Repeat cycle every 21 days until disease progression.

Reference: [Hanna N, et al. J Clin Oncol 2004;22:1589 – 97.](#)

VINORELBINE

Vinorelbine	30 mg/m ²	IV	Days 1 and 8
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Repeat cycle every 21 days to a maximum of 6 cycles.

Reference: [Gridelli C, et al. J Natl Cancer Inst 2003;95:362 – 72.](#)

VINORELBINE – CISPLATIN

Vinorelbine	25 mg/m ²	IV	Days 1, 8, 15 and 22
Cisplatin	100 mg/m ²	IV*	Day 1

*Administer over 1 hour with adequate pre- and post-hydration.

Repeat cycle every 28 days to a maximum of 10 cycles (unless toxicity/progressive disease).

Reference: [Kelly K, et al. J Clin Oncol 2001;19:3210 – 8.](#)

SMALL CELL LUNG CANCER

ACE (also known as CDE) (DOXORUBICIN – CYCLOPHOSPHAMIDE – ETOPOSIDE)

Doxorubicin	45 mg/m ²	IVP*	Day 1
Cyclophosphamide	1000 mg/m ²	IVP*	Day 1
Etoposide	100mg/m ²	IV**	Days 1, 3 and 5

*Administer as rapid IV pushes into fast running IV fluids; **Administer over 30 minutes.

Repeat cycle every 21 days.

Reference: [Giaccone G, et al. J Clin Oncol 1993;11:1230 – 40.](#)

CAV (CYCLOPHOSPHAMIDE – DOXORUBICIN – VINCRISTINE)

Cyclophosphamide	800 mg/m ²	IV	Day 1
Doxorubicin	50 mg/m ²	IV	Day 1
Vincristine*	1.4 mg/m ²	IV	Day 1

*Maximum dose 2 mg.

Repeat cycle every 21 – 28 days.

Reference: [Fukuoka M, et al. J Natl Cancer Inst 1991;83:855 – 61.](#)

CAV–EP–RADIATION (CYCLOPHOSPHAMIDE – DOXORUBICIN – VINCRISTINE – ETOPOSIDE – CISPLATIN)

CAV

Cyclophosphamide	1000 mg/m ²	IV	Day 1
Doxorubicin	50 mg/m ²	IV	Day 1
Vincristine	2 mg	IV	Day 1

Alternating every 21 days with the regimen below (for a total of 6 courses – 3 with each regimen)

EP

Etoposide	100 mg/m ² /day	IV	Days 1 – 3
Cisplatin	25 mg/m ² /day	IV	Days 1 – 3

Radiation

Patients with limited stage disease treated with thoracic irradiation, administer during cycle 1 of "EP". The radiation dose is 40 Gy in 15 fractions over 3 week's concurrent starting with the first cycle of EP. Third cycle of chemotherapy (CAV #2) delayed by 1 week to avoid radiation/doxorubicin interaction.

Reference: [Murray N. J Clin Oncol 1993;11:336 – 44.](#)

ETOPOSIDE (ORAL)

Etoposide	50 mg/m ² /day	PO	Days 1 – 21
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NOTE: Available as 50 mg capsules. Take entire daily dose each morning before eating.

Repeat cycle every 28 days (or upon count recovery).

Reference: [Johnson DH, et al. *J Clin Oncol* 1990;8:1613 – 7.](#)

ETOPOSIDE – CARBOPLATIN

Etoposide	100 mg/m ² /day	IV*	Days 1 – 3
Carboplatin	300 mg/m ²	IV	Day 1

*Administer over 2 hours.

Repeat cycle every 21 days to a maximum of 6 cycles. Concurrent radiation can be administered if limited stage disease. Administer 35 Gy in daily fractions of 2 Gy/day 5 days per week and given concurrently with the 4th cycle of chemotherapy followed by a 10 Gy boost.

Reference: [Kosmidis PA, et al. *Semin Oncol* 1994;21:23 – 30.](#)

EP (ETOPOSIDE – CISPLATIN) ± THORACIC RADIATION

Etoposide	100 – 120 mg/m ² /day	IV*	Days 1 – 3
Cisplatin	60 – 80 mg/m ²	IV**	Day 1

*Administer over 1 – 2 hours; **Administer over 30 minutes to 2 hours with adequate pre- and post-hydration.

Radiation¹

Began on Day 2 of first cycle of chemotherapy. Administered Twice daily (1.5 Gy per fraction, with 4 hours or more between fractions) and directed to the primary tumor for a total dose of 45 Gy in 3 weeks. The initial field included the primary disease site with a 1.5-cm margin around the mass, the ipsilateral hilum, the entire width of the mediastinum, and the supraclavicular lymph nodes (only if there was tumor involvement). Radiation was suspended if a patient experienced grade 4 hematologic toxicities, radiation pneumonitis or fever, a decrease in arterial oxygen pressure exceeding 10 mmHg, or if a patient had difficulty swallowing a liquid diet. The maximum spinal cord dose was limited to 30 Gy.

Repeat cycle every 21 – 28 days for 4 cycles.

References: ¹[Takada M, et al. *J Clin Oncol* 2002;20:3054 – 60;](#) [Schiller JH, et al. *J Clin Oncol* 2001;19:2114 – 22;](#) [Noda K, et al. *N Engl J Med* 2002;346:85 – 91.](#)

GEMCITABINE – DOCETAXEL

Gemcitabine	800 mg/m ²	IV*	Days 1, 8 and 15
		<i>Followed by</i>	
Docetaxel‡	30 mg/m ²	IV**	Days 1, 8 and 15

‡Routine premedication administered; *Administer over 30 minutes; **Administer over 30 minutes.

Repeat cycle every 28 days for 6 cycles.

NOTE: Patients with brain metastases at the time of initial staging were allowed to receive whole brain radiation concurrent with initiation of chemotherapy.

Reference: [Hainsworth JD, et al. *Cancer* 2004;100:2437 – 41.](#)

GEMCITABINE – IRINOTECAN

Gemcitabine	1000 mg/m ²	IV*	Days 1 and 8
		<i>Immediately followed by</i>	
Irinotecan	100 mg/m ²	IV**	Days 1 and 8

*Administered over 30 minutes; **Administer over 90 minutes.

NOTE: Dose of irinotecan could be increased to 115 mg/m² in subsequent cycles if no hematologic toxicity greater than grade 3 or non-hematologic toxicity greater than grade 2 (except nausea/vomiting, alopecia, anorexia, or fever) was observed during the first cycle.

Repeat cycle every 21 days for at least 4 cycles beyond achievement of response or stable disease, or until documentation of disease progression or unacceptable toxicity.

Reference: [Rocha-Lima CM, et al. *Ann Oncol* 2007;18:331 – 7.](#)

IFOSFAMIDE – CARBOPLATIN – ETOPOSIDE

Ifosfamide	3750 mg/m ²	CIVI*	Day 1
Mesna	5065 mg/m ²	CIVI**	Day 1
Carboplatin	300 mg/m ²	IV***	Day 1
Etoposide	50 mg/day	PO	Days 1 – 14

*Administered as a continuous infusion over 24 hours; **Start mesna infusion 15 minutes prior to starting ifosfamide infusion and continue for 12 hours post completion of ifosfamide infusion; ***Administer over 15 minutes.

Consider dose escalation of ifosfamide to 5000 mg/m² and etoposide to 50 mg alternating with 100 mg per day on cycle 2 if there are no significant complications.

Repeat cycle every 28 days for a maximum of 6 – 8 cycles.

Reference: [Wolff AC, et al. *J Clin Oncol* 1995;13:1615–22.](#)

IRINOTECAN – CISPLATIN

Irinotecan	65 mg/m ²	IV	Days 1 and 8
Cisplatin	30 mg/m ²	IV*	Days 1 and 8

*Administer with adequate pre and post-hydration.

Repeat cycle every 21 days for a minimum of 4 cycles.

Reference: [Hanna N, et al. *J Clin Oncol* 2006;24:2038 – 43.](#)

TOPOTECAN

Topotecan	1.5 mg/m ² /day	IV*	Days 1 – 5
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*Administer over 30 minutes.

Repeat cycle every 21 days until disease progression/unacceptable toxicity or maximal response. Consider dose escalation to 2 mg/m²/day in the absence of Grade 2 or higher toxicity after cycle 1.

References: [von Pawel J, et al. *J Clin Oncol* 1999;17:658 – 67;](#) [Schiller JH, et al. *J Clin Oncol* 2001;19:2114 – 22.](#)

MESOTHELIOMA

PEMETREXED – CISPLATIN

Pemetrexed#	500 mg/m ²	IV*	Day 1
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Followed 30 minutes later by

Cisplatin	75 mg/m ²	IV**	Day 1
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#Premedication with oral dexamethasone 4 mg twice daily for 3 days, beginning the day prior to the dose of pemetrexed, has been used to significantly reduce the incidence and severity of rash. Folic acid (dose 350 micrograms to 1 mg daily) and vitamin B₁₂ (1000 micrograms IM) supplementation should be prescribed to begin 1 – 3 weeks before starting the first dose of chemotherapy. Vitamin B₁₂ should be re-dosed every 9 weeks while receiving therapy; *Administer over 10 minutes;

**Administer over 2 hours with adequate pre- and post-hydration.

Repeat cycle every 21 days.

Reference: [Vogelzang NJ, et al. J Clin Oncol 2003;21:2636 – 44.](#)