# Key question 1

## Key question

*Welk bestralingsschema heeft de voorkeur bij palliatieve radiotherapie voor thoracale klachten (zoals hemoptoe, dyspnoe, dysphagie) bij patiënten met NSCLC?*

P: Patiënten met gemetastaseerd niet-kleincellig longcarcinoom (stadium IV)

I: 5x4 Gy vs. 1-2x8 Gy (lage dosis)

C: 10-(13)x3 Gy (hoge dosis)

O: Overleving, palliatieve respons (symptoomverlichting), duur van palliatieve response, toxiciteit

## Search strategy

Search date: November 17, 2014.

Databases: OVID Medline, Embase and the Cochrane Library (see appendix for search strings).

Search limits:

* Publication date: 2006-2014;
* English and Dutch only;
* Study design: meta-analyses, systematic reviews, RCTs, controlled clinical trials.

## Search Results

Table 1. Overall search results.

|  |  |
| --- | --- |
| **Database** | **Number of hits** |
| OVID Medline | 1545 |
| OVID PreMedline | 103 |
| EMBASE.com | 535 |
| Cochrane Database of Systematic Reviews | 6 |
| DARE | 27 |
| HTA database | 4 |
| CENTRAL | 254 |
| **Total hits** | **2474** |
| N excluded (language, year, duplicates) | 849 |
| **Total unique eligible hits** | **1625** |

### Excluded studies

1625 unique hits were screened on title and abstract (Table 1). Of these, 1605 were excluded. The most important reasons for exclusion were:

1. Other population: patients with other cancer types
2. Other intervention: interventions other than those specified
3. Wrong study design: narrative reviews, observational studies

Of the remaining 20 papers, the full-text was retrieved. Based on the full-text, an additional 14 studies were excluded. Table 2 provides an overview of these excluded studies.

### Included studies

The following 5 systematic reviews were included:

* Fairchild A, Harris K, Barnes E, Wong R, Lutz S, Bezjak A, et al. Palliative thoracic radiotherapy for lung cancer: a systematic review. J Clin Oncol. 2008;26(24):4001-11.
* Lester JF, Macbeth FR, Toy E, Coles B. Palliative radiotherapy regimens for non-small cell lung cancer. Cochrane Database of Systematic Reviews. 2006;4(4):CD002143.
* Ma J-T, Zheng J-H, Han C-B, Guo Q-Y. Meta-analysis comparing higher and lower dose radiotherapy for palliation in locally advanced lung cancer. Cancer Sci. 2014;105(8):1015-22.
* Reveiz L, Rueda J-R, Cardona AF. Palliative endobronchial brachytherapy for non-small cell lung cancer. Cochrane Database of Systematic Reviews. 2012;12.
* Ung Y.C, Yu E, Falkson C, Haynes A.E, Stys-Norman D, Evans W.K, et al. The role of high-dose-rate brachytherapy in the palliation of symptoms in patients with non-small-cell lung cancer: A systematic review. Brachytherapy. 2006;5(3):189-202.

The following primary study was included:

* Sau S, Sau S, Dutta P, Gayen GC, Banerjee S, Basu A. A comparative study of different dose fractionations schedule of thoracic radiotherapy for pain palliation and health-related quality of life in metastatic NSCLC. Lung India. 2014;31(4):348-53.

Table 2. Key question 1: overview of excluded studies based on full-text evaluation.

| **Author** | **Reference** | **Title** | **Reason** |
| --- | --- | --- | --- |
| Beli I | Rev Recent Clin Trials 2010 5(2):103-11 | Hypofractionated radiotherapy in non small cell lung cancer: a review of the current literature | narrative review |
| Cardona AF | Cochrane Database of Systematic Reviews 2008 2(2):CD004284 | Palliative endobronchial brachytherapy for non-small cell lung cancer | superseded by Reveiz et al. |
| Chen AB | J Clin Oncol 2013 31(5):558-64 | Palliative radiation therapy practice in patients with metastatic non-small-cell lung cancer: a Cancer Care Outcomes Research and Surveillance Consortium (CanCORS) Study | not comparing two radiation protocols retrospective/observational |
| Chu D | World J. Oncol. 2013 4(2):67-73 | An update on the quality of life measurements in lung cancer patients receiving palliative radiotherapy: A literature review | SR on quality of life measurement scales |
| Kepka L | Expert Rev Anticancer Ther 2010 10(4):559-69 | Palliative thoracic radiotherapy for lung cancer | narrative review |
| Lutz ST | Cancer 2007 109(8):1462-70 | A review of hypofractionated palliative radiotherapy | narrative review |
| Mallick I | J Cancer Res Ther 2006 2(3):119-25 | Optimization of dose and fractionation of endobronchial brachytherapy with or without external radiation in the palliative management of non-small cell lung cancer: a prospective randomized study | locally advanced lung cancer |
| Rodrigues G | CLIN LUNG CANCER 2012 13(1):1-5 | Consensus statement on palliative lung radiotherapy: third international consensus workshop on palliative radiotherapy and symptom control | consensus statement/insufficient literature search/no quality assessment |
| Schroder C | Strahlenther Onkol 2013 189(9):771-6 | Does high-dose radiotherapy benefit palliative lung cancer patients?: An intradepartmental comparison of two dose regimens | retrospective/observational |
| Simoff M.J | Chest 2013 143(5 SUPPL):e455S-e497S | Symptom management in patients with lung cancer: Diagnosis and management of lung cancer, 3rd ed: American college of chest physicians evidence-based clinical practice guidelines | guideline |
| Socinski M.A | Chest 2013 143(5 SUPPL):e341S-e368S | Treatment of stage IV non-small cell lung cancer: Diagnosis and management of lung cancer, 3rd ed: American college of chest physicians evidence-based clinical practice guidelines | guideline |
| Sundstrom S | J Thorac Oncol 2006 1(8):816-24 | Palliative thoracic radiotherapy in locally advanced non-small cell lung cancer: can quality-of-life assessments help in selection of patients for short- or long-course radiotherapy? | stage III |
| Tang JI | J Med Imaging Radiat Oncol 2008 52(5):497-502 | Patients' preference for radiotherapy fractionation schedule in the palliation of symptomatic unresectable lung cancer | patient preference trial/locally advanced lung Ca |
| Zhang QN | Thorac. Cancer 2012 3(3):269-279 | Non-conventional radiotherapy versus conventional radiotherapy for inoperable non-small-cell lung cancer: a meta-analysis of randomized clinical trials (Provisional abstract) | no comparison between high- and low-dose |

# Search strings Question 1

## medline (ovid)

1 randomized controlled trial.pt. (399610)

2 controlled clinical trial.pt. (90639)

3 randomized.ab. (294664)

4 placebo.ab. (154739)

5 clinical trials as topic.sh. (176324)

6 randomly.ab. (206726)

7 trial.ti. (128505)

8 1 or 2 or 3 or 4 or 5 or 6 or 7 (909892)

9 exp animals/ not humans.sh. (4092437)

10 8 not 9 (836166)

11 meta-analysis.mp,pt. or review.pt. or search:.tw. (2138181)

12 (lung adj5 neoplas$).tw. (2495)

13 (lung adj5 cancer$).tw. (99613)

14 (lung adj5 carcin$).tw. (28508)

15 (lung adj5 tumo$).tw. (24157)

16 (lung adj5 metasta$).tw. (21539)

17 (lung adj5 malig$).tw. (5039)

18 exp Carcinoma, Non-Small-Cell Lung/ or exp Lung Neoplasms/ (181069)

19 NSCLC.tw. (18762)

20 or/12-19 (217733)

21 (10 or 11) and 20 (35596)

22 radiotherap$.mp. (182358)

23 21 and 22 (4248)

24 limit 23 to yr="2006 -Current" (1545)

## PreMedline (OVID)

1 randomized controlled trial.pt. (382)

2 controlled clinical trial.pt. (27)

3 randomized.ab. (24534)

4 placebo.ab. (9028)

6 randomly.ab. (21939)

7 trial.ti. (10321)

8 1 or 2 or 3 or 4 or 5 or 6 or 7 (52039)

11 meta-analysis.mp,pt. or review.pt. or search:.tw. (48451)

12 (lung adj5 neoplas$).tw. (143)

13 (lung adj5 cancer$).tw. (8934)

14 (lung adj5 carcin$).tw. (1579)

15 (lung adj5 tumo$).tw. (1605)

16 (lung adj5 metasta$).tw. (1896)

17 (lung adj5 malig$).tw. (454)

19 NSCLC.tw. (2470)

20 or/12-19 (11413)

21 (8 or 11) and 20 (1253)

22 radiotherap$.mp. (8207)

23 21 and 22 (122)

24 limit 23 to yr="2006 -Current" (103)

## EMBASE (via embase.com)

|  |  |  |
| --- | --- | --- |
| #1 | (lung NEAR/5 neoplas\*):ab,ti OR (lung NEAR/5 cancer\*):ab,ti OR (lung NEAR/5 carcin\*):ab,ti OR (lung NEAR/5 tumo\*):ab,ti OR (lung NEAR/5 metasta\*):ab,ti OR (lung NEAR/5 malig\*):ab,ti OR nsclc:ab,ti | 202467 |
| #2 | 'non small cell lung cancer'/exp | 61751 |
| #3 | #1 OR #2 | 214208 |
| #4 | 'radiotherapy'/exp | 400284 |
| #5 | #3 AND #4 | 26163 |
| #6 | #5 AND ([cochrane review]/lim OR [systematic review]/lim OR [randomized controlled trial]/lim OR [meta analysis]/lim) AND ([article]/lim OR [article in press]/lim OR [review]/lim) AND ([dutch]/lim OR [english]/lim) AND [2006-2014]/py | 535 |

## cochrane library (via wiley)

#1 MeSH descriptor: [Carcinoma, Non-Small-Cell Lung] 1 tree(s) exploded

#2 MeSH descriptor: [Radiotherapy] 1 tree(s) exploded

#3 #1 and #2