

Correlazione tra volume delle lesioni ed efficacia del trattamento radiante esterno delle metastasi ossee

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Radiotherapy and Oncology 111 (2014) 11–17

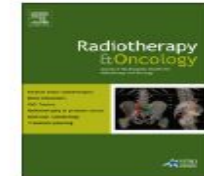


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Systematic review

Review of international patterns of practice for the treatment of painful bone metastases with palliative radiotherapy from 1993 to 2013



Marko Popovic^a, Mariska den Hartogh^b, Liying Zhang^a, Michael Poon^a, Henry Lam^a, Gillian Bedard^a, Natalie Pulenzas^a, Breanne Lechner^a, Edward Chow^{a,*}

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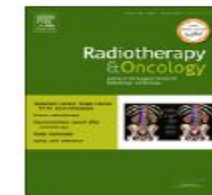


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Systematic review

Single fraction conventional external beam radiation therapy for bone metastases: A systematic review of randomised controlled trials

Kristopher Dennis^a, Leila Makhani^b, Liang Zeng^b, Henry Lam^c, Edward Chow^{b,*}

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CLINICAL INVESTIGATION

Palliation

INTERNATIONAL PATTERNS OF PRACTICE IN PALLIATIVE RADIOTHERAPY FOR PAINFUL BONE METASTASES: EVIDENCE-BASED PRACTICE?

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EDGAR BEN-JOSEF, M.D.,‡ DANIEL ROOS, M.D., F.R.A.N.Z.C.R.,§ WILLIAM HARTSELL, M.D.,¶
TANYA HOLT, F.R.A.N.Z.C.R.,|| JACKSON WU, M.D., F.R.C.P.C.,# NORA JANJAN, M.D., M.P.S.A.,
M.B.A.,** AND EDWARD CHOW, M.B.B.S., PH.D., F.R.C.P.C.†



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doi:10.1016/j.ijrobp.2010.11.026

ASTRO GUIDELINE

PALLIATIVE RADIOTHERAPY FOR BONE METASTASES: AN ASTRO EVIDENCE-BASED GUIDELINE

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EDWARD CHOW, M.B.B.S.,§ CAROL HAHN, M.D.,¶
PETER HOSKIN, M.D.,|| DAVID HOWELL, M.D.,# ANDRE KONSKI, M.D.,** LISA KACHNIC, M.D.,††
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CHARLES VON GUNTEN, M.D., PH.D., F.A.C.P.,||| EHUD MENDEL, M.D., F.A.C.S.,###
ANDREW VASSIL, M.D.,*** DEBORAH WATKINS BRUNER, R.N., PH.D.,††† AND WILLIAM HARTSELL, M.D.†††



Original Article

Update on the Systematic Review of Palliative Radiotherapy Trials for Bone Metastases

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25 studi randomizzati (5617 pazienti)

Tassi di risposta complessiva:

- 60% (1696/2818) nel braccio della frazione singola
- 61% (1711/2799) nel braccio con frazionamenti multipli

Tassi di risposta completa:

- 23% (620/2641) nel braccio della frazione singola
- 24%(634/2622) nel braccio con frazionamenti multipli



Quali fattori influenzano la risposta:

Risposta globale: KPS, trattamenti medici in atto (chemioterapia), ADL (EORTC-BM22)

Risposta radiologica sulla singola lesione:

- istologia del tumore primitivo
- microambiente tumorale
- parametri biologici: indice proliferativo, ipossia
- VOLUME?**



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Cancer Microenvironment
DOI 10.1007/s12307-014-0148-4

ORIGINAL PAPERS

Microenvironmental Influences on Metastasis Suppressor Expression and Function during a Metastatic Cell's Journey

Wen Liu • Carolyn J. Vivian • Amanda E. Brinker •
Kelsey R. Hampton • Evi Lianidou • Danny R. Welch

Archives of Biochemistry and Biophysics 561 (2014) 159–166



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Review

Cancer and bone: A complex complex

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EORTC QLQ – BM22

Patients sometimes report that they have the following symptoms or problems. Please indicate the extent to which you have experienced these symptoms or problems during the **past week**. Please answer by circling the number that best applies to you.

| During the past week have you had pain in any of the following parts of your body? | Not at All | A Little | Quite a Bit | Very Much |
|--|------------|----------|-------------|-----------|
| 1. in your back? | 1 | 2 | 3 | 4 |
| 2. in your leg(s) or hip(s)? | 1 | 2 | 3 | 4 |
| 3. in your arm(s) or shoulder(s)? | 1 | 2 | 3 | 4 |
| 4. in your chest or rib(s)? | 1 | 2 | 3 | 4 |
| 5. in your buttock(s)? | 1 | 2 | 3 | 4 |
| During the <u>past week</u>: | | | | |
| 6. Have you had constant pain? | 1 | 2 | 3 | 4 |
| 7. Have you had intermittent pain? | 1 | 2 | 3 | 4 |
| 8. Have you had pain not relieved by pain medications? | 1 | 2 | 3 | 4 |
| 9. Have you had pain while lying down? | 1 | 2 | 3 | 4 |
| 10. Have you had pain while sitting? | 1 | 2 | 3 | 4 |
| 11. Have you had pain when trying to stand up? | 1 | 2 | 3 | 4 |
| 12. Have you had pain while walking? | 1 | 2 | 3 | 4 |
| 13. Have you had pain with activities such as bending or climbing stairs? | 1 | 2 | 3 | 4 |
| 14. Have you had pain with strenuous activity (e.g. exercise, lifting)? | 1 | 2 | 3 | 4 |
| 15. Has pain interfered with your sleeping at night? | 1 | 2 | 3 | 4 |
| 16. Have you had to modify your daily activities because of your illness? | 1 | 2 | 3 | 4 |
| 17. Have you felt isolated from those close to you (e.g. family, friends)? | 1 | 2 | 3 | 4 |
| 18. Have you worried about loss of mobility because of your illness? | 1 | 2 | 3 | 4 |
| 19. Have you worried about becoming dependent on others because of your illness? | 1 | 2 | 3 | 4 |
| 20. Have you worried about your health in the future? | 1 | 2 | 3 | 4 |
| 21. Have you felt hopeful your pain will get better? | 1 | 2 | 3 | 4 |
| 22. Have you felt positive about your health? | 1 | 2 | 3 | 4 |





ESPERIENZA

44 PAZIENTI sottoposti a RTE in frazione unica (800 cGy) mediante campi multipli (5 pazienti 11%) o contrapposti (39 pazienti 89%)

- Dolore misurato prima e dopo il trattamento (1 mese) utilizzando la scala NRS definendo come risposta al trattamento la diminuzione di almeno 1 punto sulla scala NRS rispetto al valore indicato prima del trattamento stesso

E. Chow, »International consensus on palliative radiotherapy endpoints for future clinical trials in bone metastases» Radiother Oncol, 2001



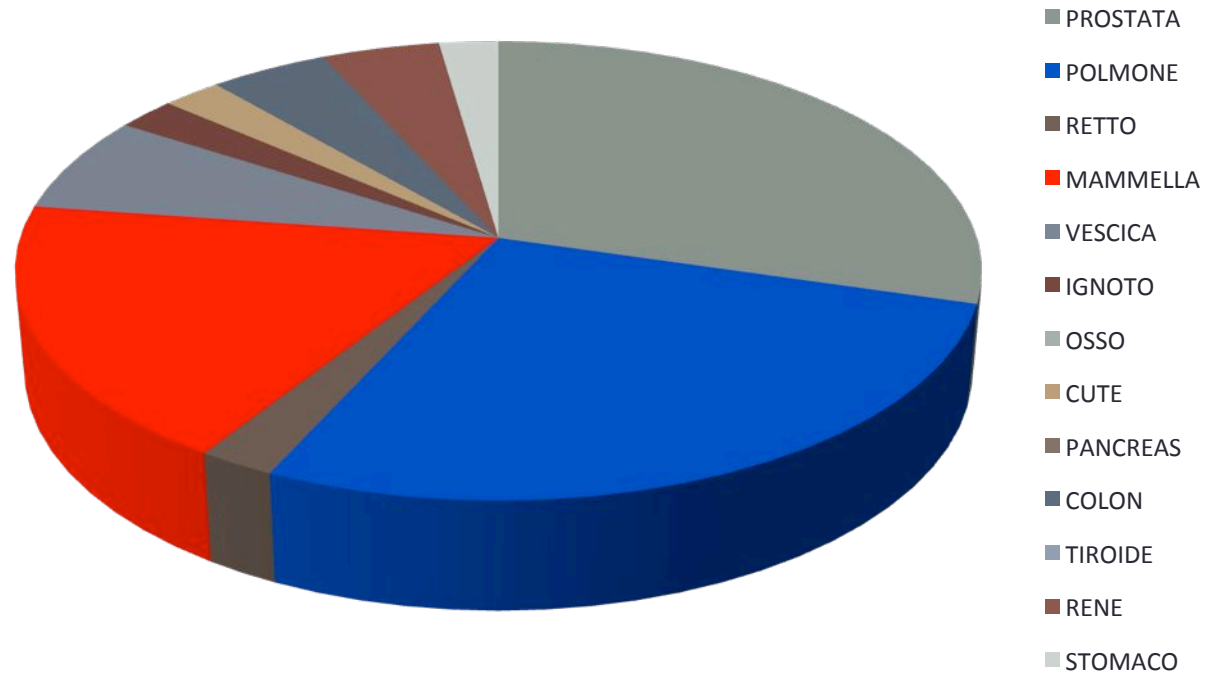
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CARATTERISTICHE DEI PAZIENTI

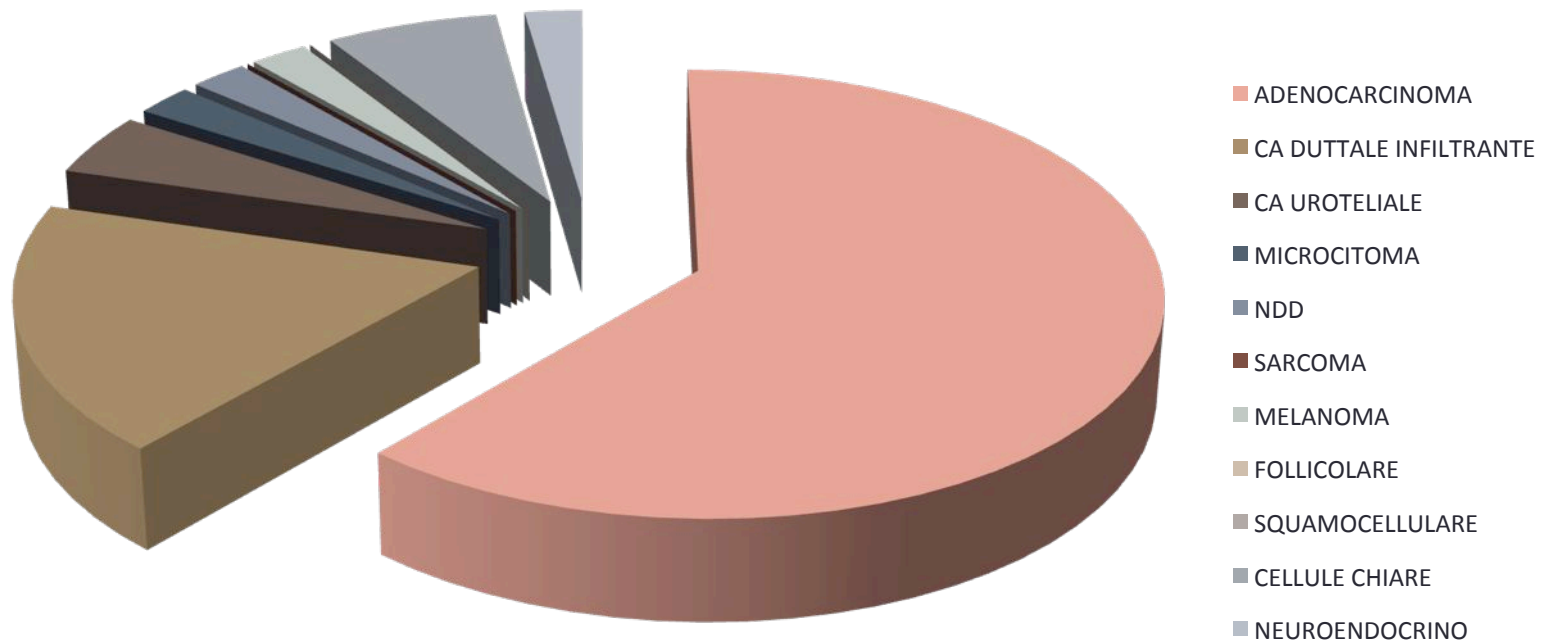


Tumore primitivo





Istologia





ECOG 19pz (0) 20pz (1) 5 pz (2)

Chirurgia sul T 19 pz SI 25 pz NO

RTE sul T 12pz SI e 32 pz NO

CT sul T 26 pz SI e 18 pz NO

OT 13 pz Si e 31 pz NO

Bifosfonati 22 pz Si e 22 pz NO

Adiuvanti 19 pz SI e 25 pz No



Localizzazioni preferenziali

Localizzazioni vertebrali 27 pazienti

Localizzazioni extravertebrali 17 pazienti

- metastasi ossee multiple 31 pazienti
- metastasi ossee, linfonodali, polmonari 6 pazienti
- metastasi ossee e linfonodali 3 pazienti
- metastasi ossee, linfonodali, epatiche 1 paziente
- metastasi ossee, linfonodali, epatiche e polmonari 1 paziente
- metastasi ossee, epatiche, surrenali 1 paziente
- multiple 1 paziente



Variabile dimensione:

- valutazione radiologica delle lesioni:
misurazione del volume sulla TC di
simulazione come prodotto dei tre diametri
principali per il fattore di conversione 0,52
(formula dell'ellissoide)

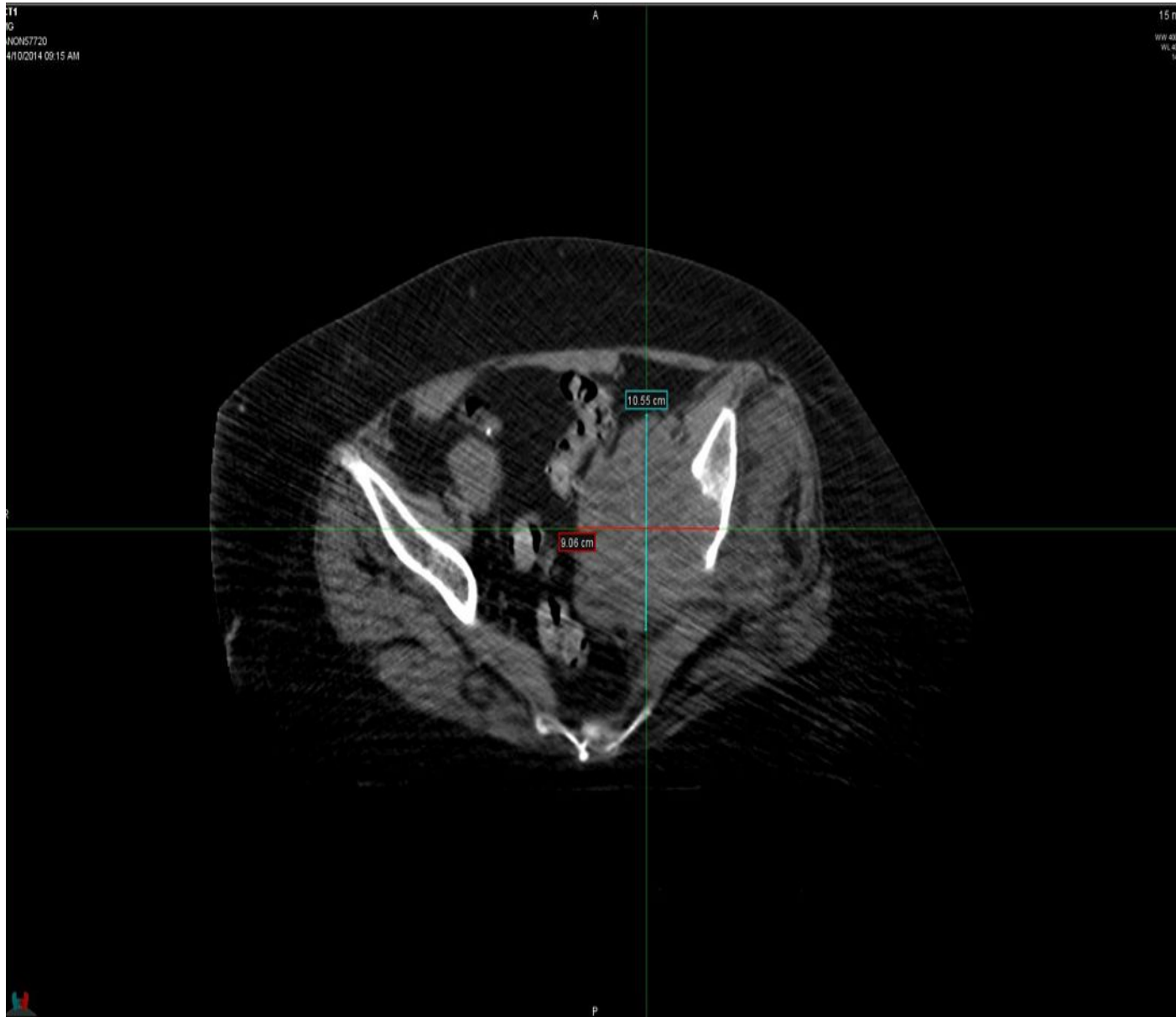


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ANALISI STATISTICA

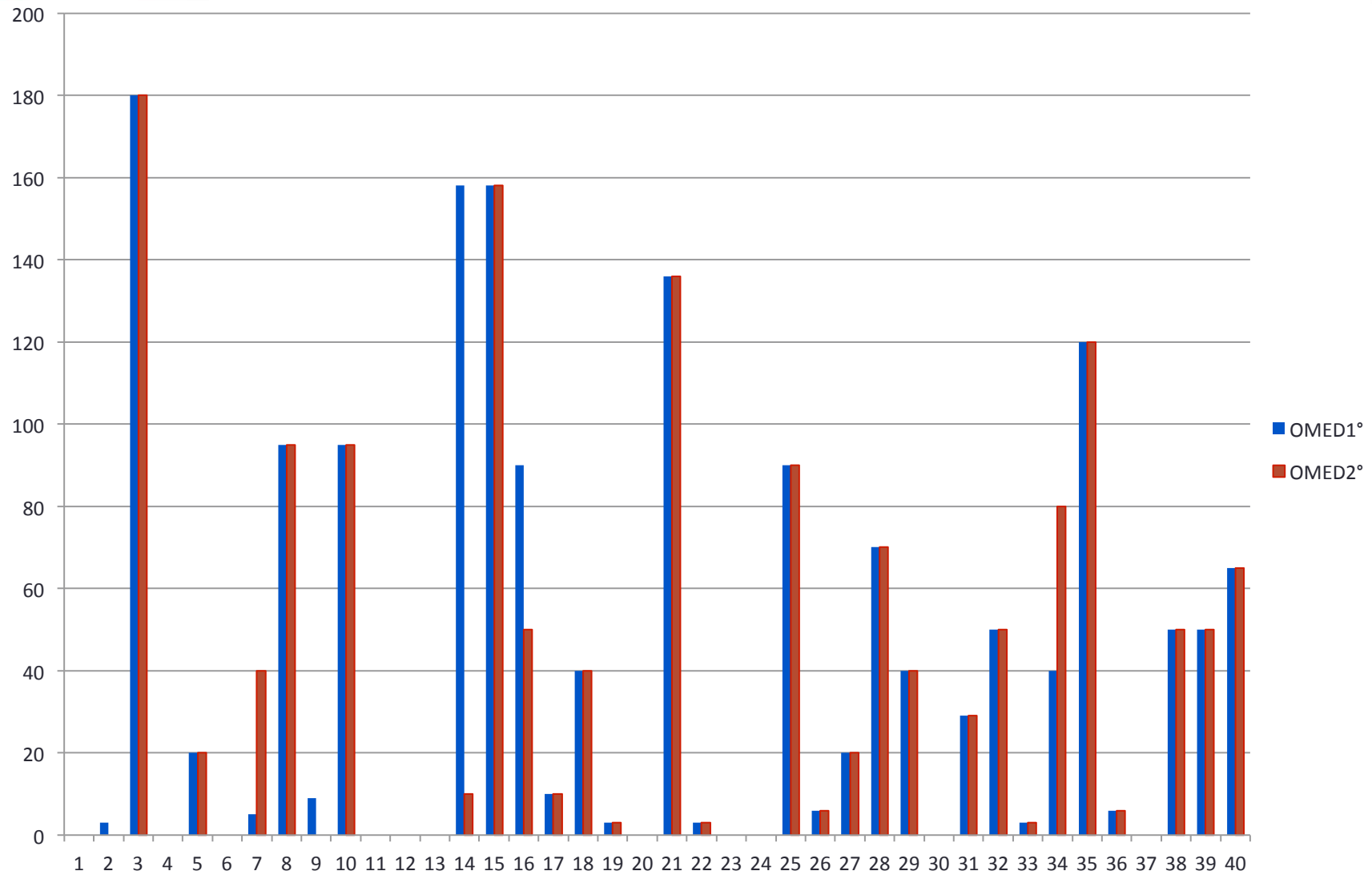
- Confronto su questi parametri mediante test T-student a due code per dati appaiati con soglia di significatività pari al 5%



RISULTATI

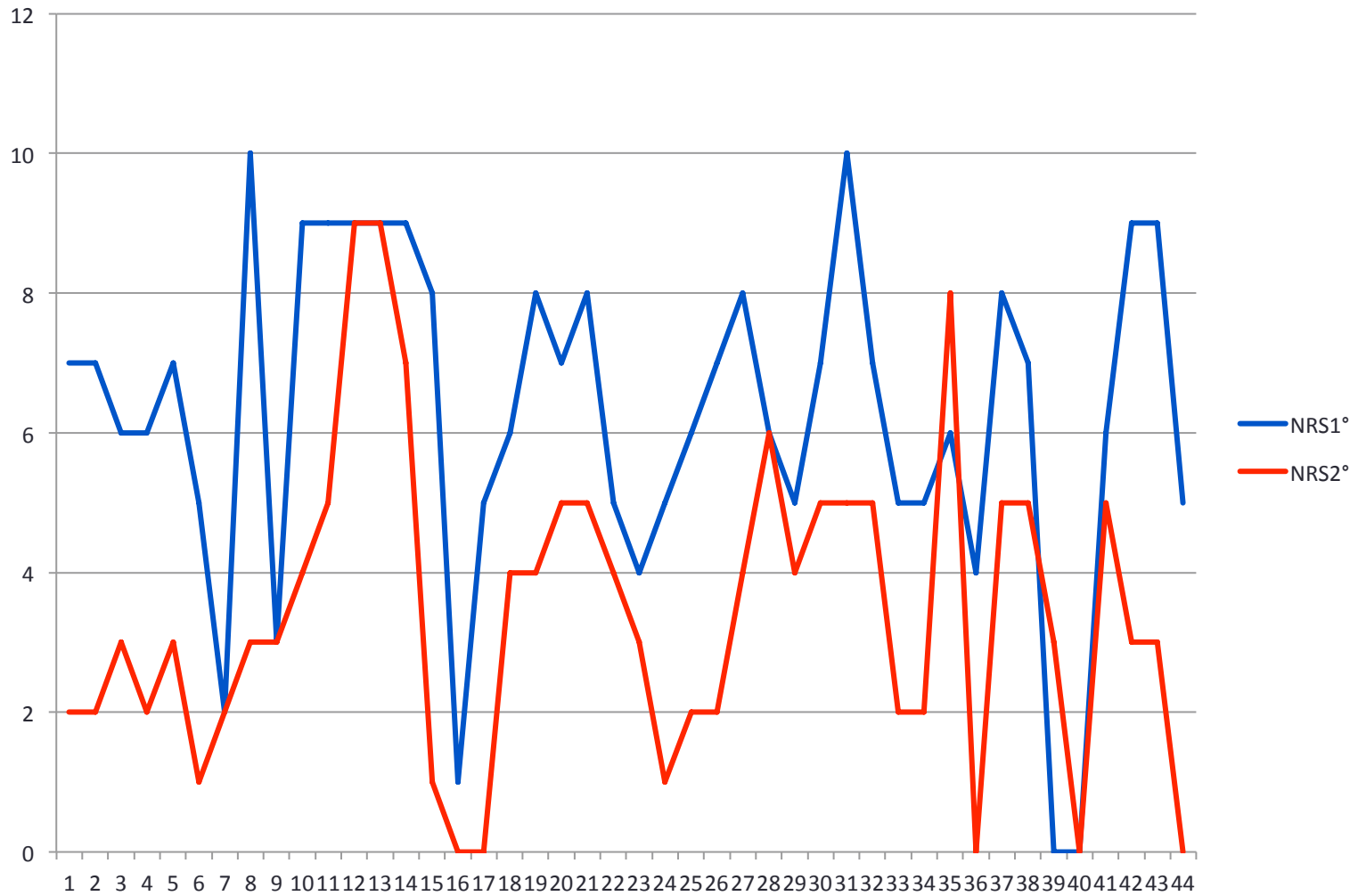
- NRS medio pre terapia era 6(0-10)
- 43 pz valutabili (1 non valutabili perché deceduto): in 42 si è osservato un significativo miglioramento post- trattamento ($p < 0.001$) con NRS in media di 3 (0-7)
- In 1 pz un peggioramento di 2 punti

Wong E. et al. «Re-irradiation for painful bone metastases- A systematic review», Radiother Oncol 2013.





NRS





42 pz con miglioramento:

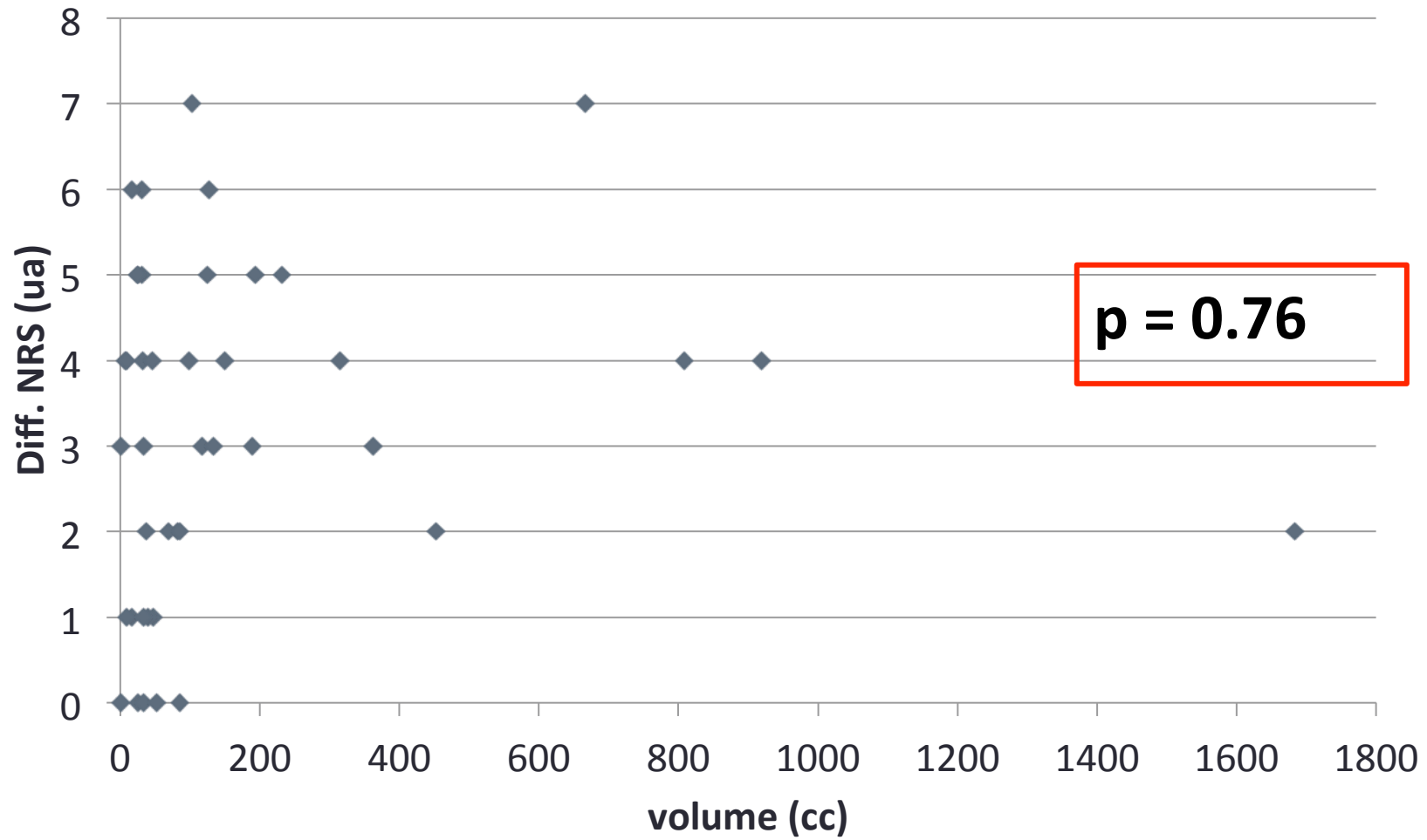
22pz(52%) con diminuzione dell'NRS da 0 a 3
(valore medio 2) avevano volume medio
165,36cc

20pz (48%) con miglioramento NRS >3 (valore
medio 5),avevano volume medio di 197,67cc

***Tale miglioramento non è correlato con il
volume delle lesioni : media 172.71cc
(0.89-1683,32cc)***



t-test





CONCLUSIONI

Seppur numero esiguo di pazienti, i risultati deporrebbero per una non significativa correlazione tra volume delle lesioni e risposta al trattamento radiante nell'immediato post-trattamento