


The surgical margins and complete resection as predictors of local recurrence and survival on primary osteosarcoma of the spine: a systematic review

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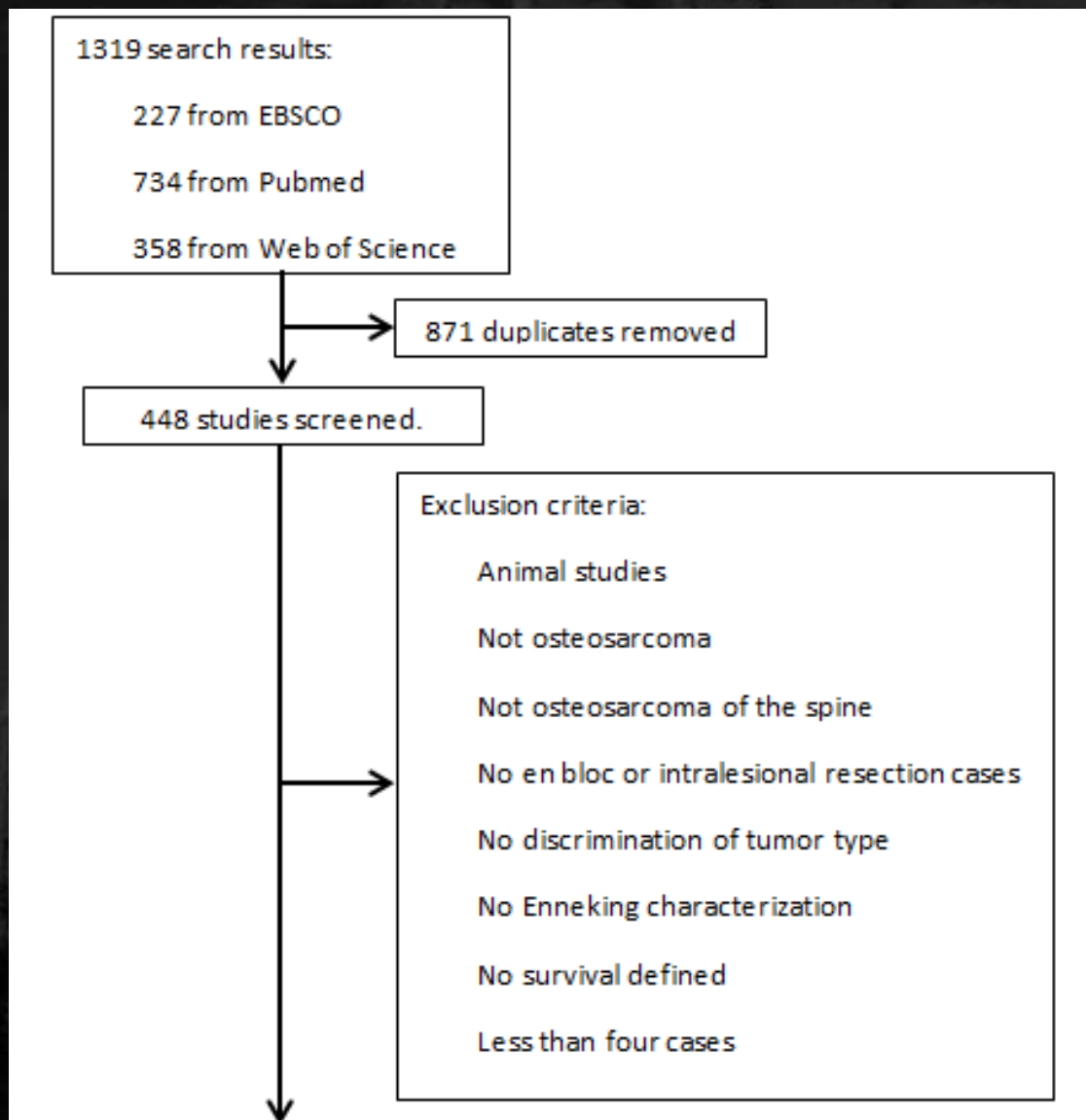
Osteosarcoma of spine

- Rare (2.5 - 8.5 / 100.000 persons per year)
 - Aggressive malignant bone tumor
 - Local recurrence is high
 - Multimodality treatment:
 - Neoadjuvant and/or adjuvant chemotherapy
 - Neoadjuvant and/or adjuvant radiotherapy
 - Surgical treatment
 - En bloc resection
- 
- Enneking appropriate margins (marginal or wide)
 - Death

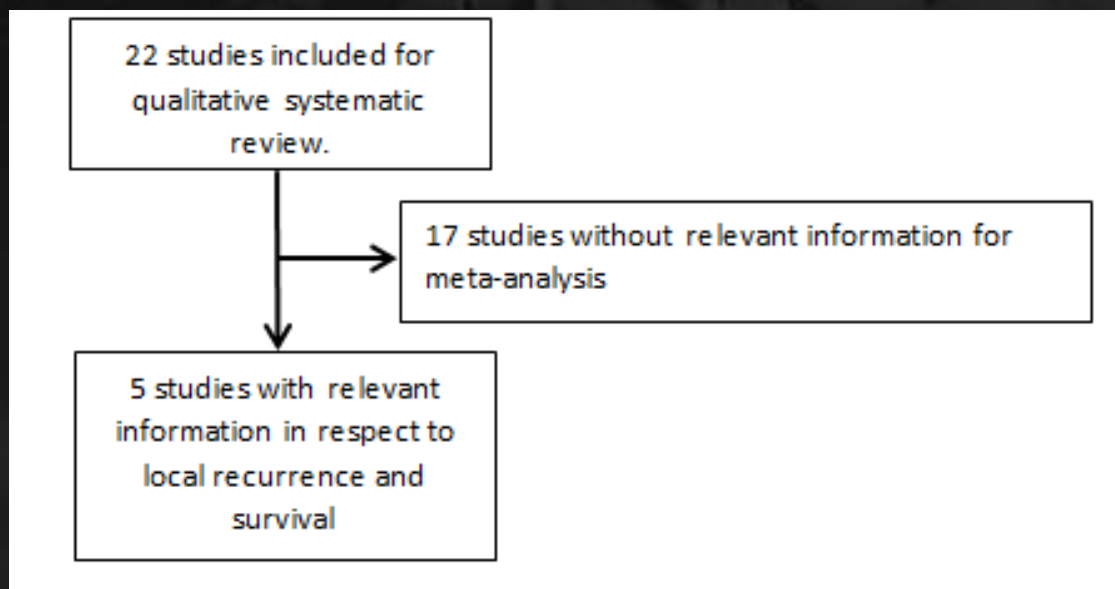
Methods

- Systematic review with meta-analysis
- Data bases researched:
 - PubMed
 - Ebsco
 - Web of Science
- Keywords:
 - Osteosarcoma / Osteogenic Sarcoma
 - +
 - Primary
 - +
 - Spine
 - +
 - En bloc resection / Intralesional resection

Methods



Methods



- Dekutoski et al (2016)
- Feng et al (2013)
- Lim et al (2013)
- Ozaki et al (2002)
- Schwab et al (2012)

Sample description

- 123 patients diagnosed with a primary spine osteosarcoma (110 resections)
- Surgical treatment from 1951 to 2012
- 61 Men : 62 Women
- Weighted mean of age: 33.9 ± 15.8 yrs
- Enneking Staging (3 studies – 88 patients):
 - IB: 2 (2%)
 - IIA:5 (6%)
 - IIB:77 (88 %)
 - IIIA:1 (1%)
 - IIIB:3 (3%)
- Follow-up: 1-10 yrs

Treatment

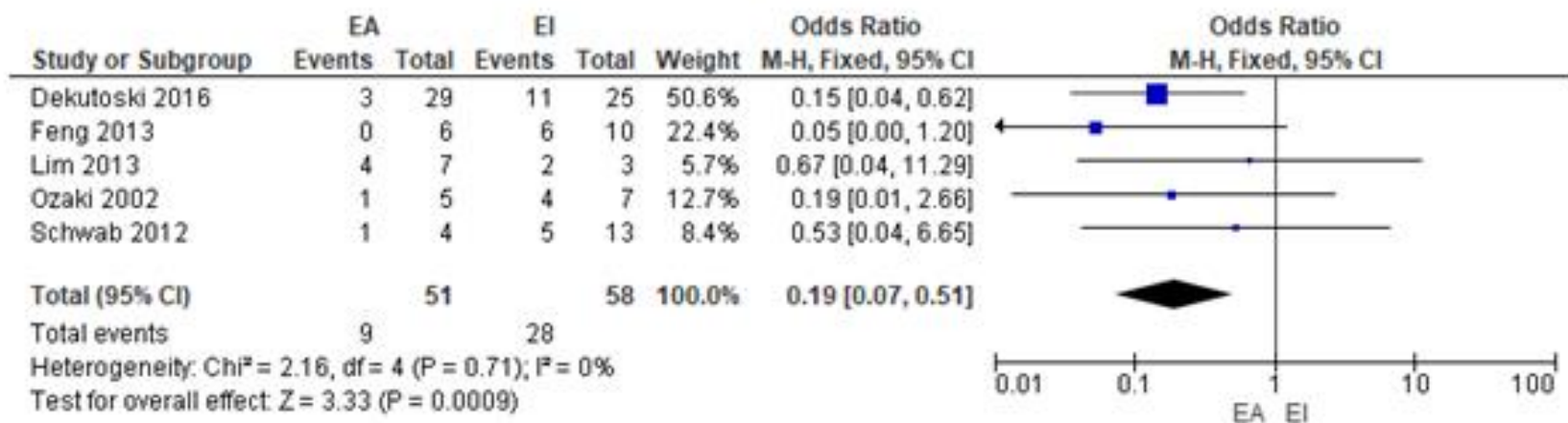
Study*	Design	Resections	EA ^a	EI ^a	RT ^a	QT ^a	Level of evidence
Dekutoski et al 2016	Case series	55	29 (53)	26 (47)	21 (38)	45 (82)	Low
Feng et al 2013	Case series	16	6 (38)	10 (62)	14 (88)	16 (100)	Low
Lim et al 2013	Case series	10	7 (70)	3 (30)	9 (90)	9 (90)	Low
Ozaki et al 2002	Case series	12	5 (42)	7 (58)	2 (17)	12 (100)	Low
Schwab et al 2012	Case series	17	4 (24)	13 (76)	8 (47)	17 (100)	Low
Total	-	110	51 (46)	59 (54)	54 (49)	99 (90)	-

EA: Enneking appropriate margins; EI: Enneking inappropriate margins

* Author, year

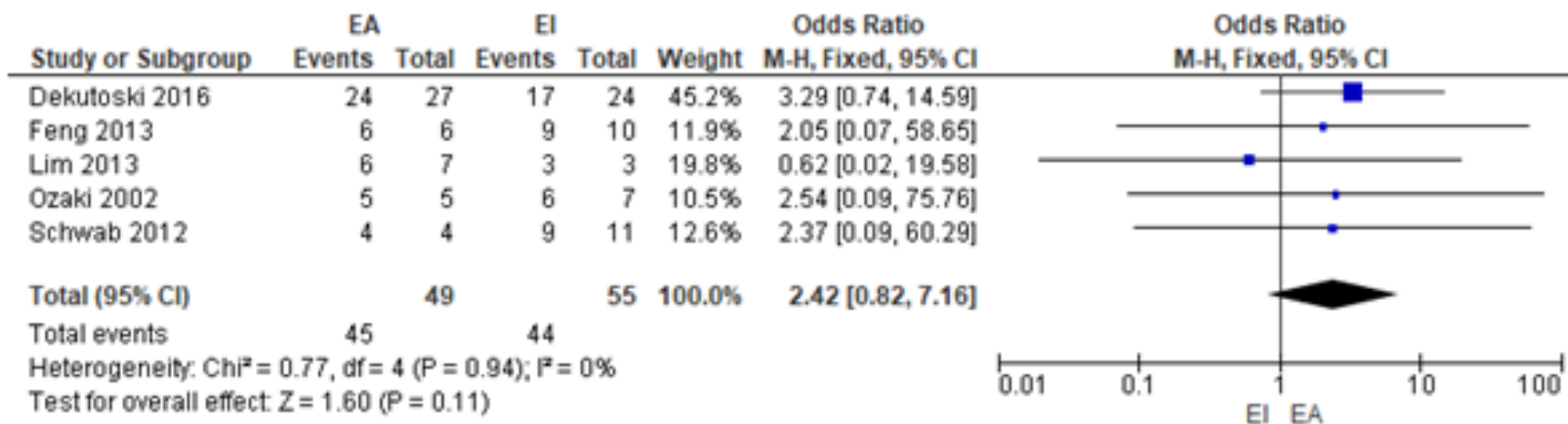
^a n (%)

Local Recurrence



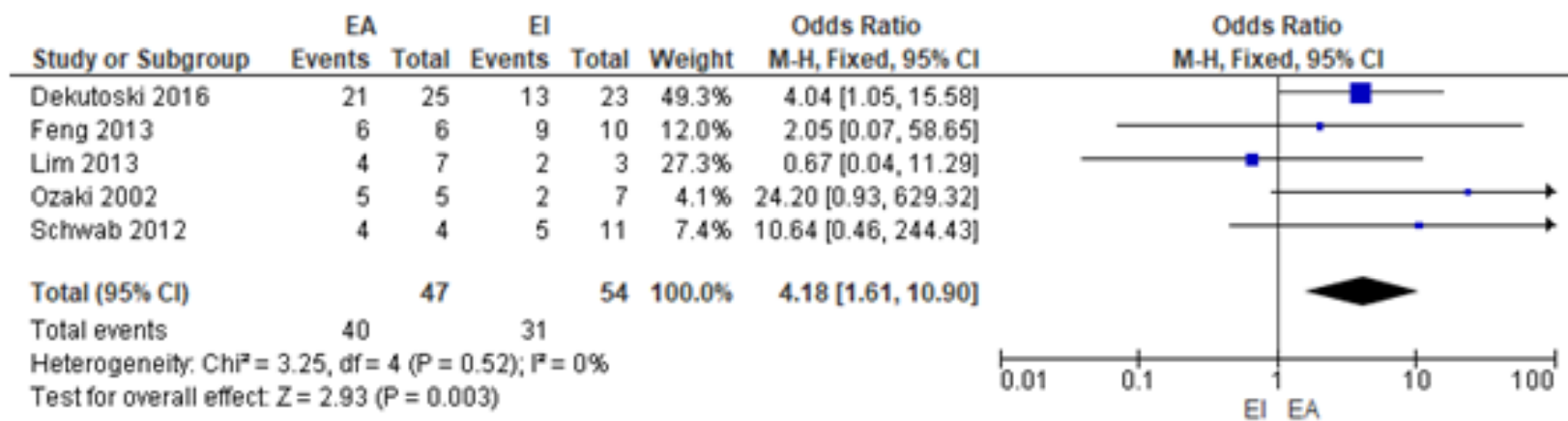
EA: Enneking appropriate; EI: Enneking inappropriate

Survival at 12 months



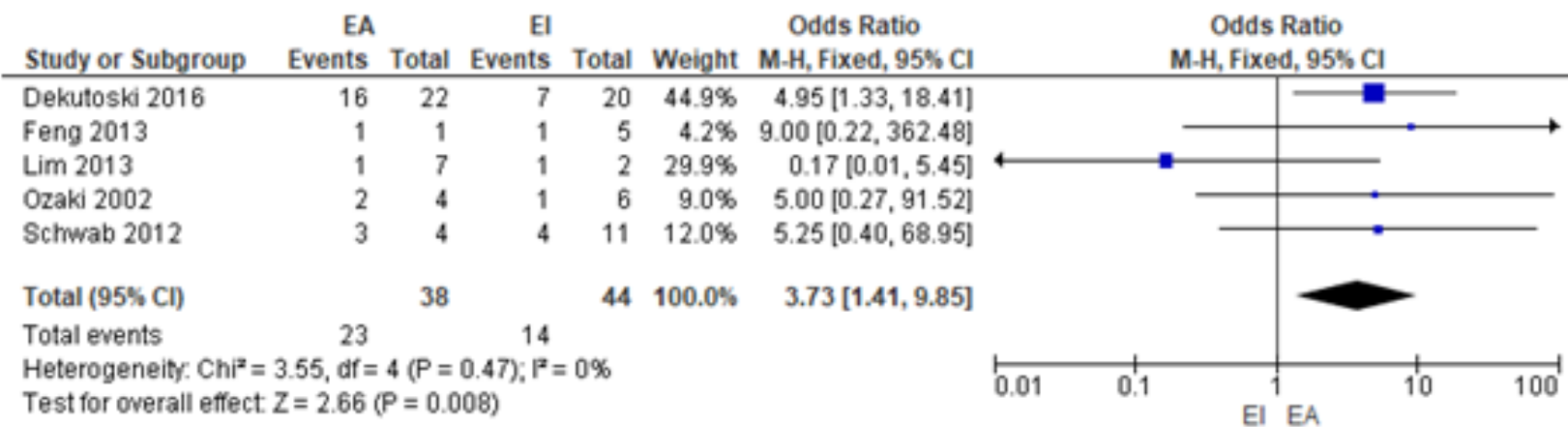
EA: Enneking appropriate; EI: Enneking inappropriate

Survival at 24 months



EA: Enneking appropriate; EI: Enneking inappropriate

Survival at 60 months



EA: Enneking appropriate; EI: Enneking inappropriate

Conclusions

- Only an En Bloc Resection can provide Enneking appropriate margins (marginal or wide)
- Low local recurrence and improved survival after 24 months are associated with Enneking appropriate margins
- Chemotherapy can justify the absence of difference on survival until 12 months

Disclosure: Nothing to declare