

**UCC Library and UCC researchers have made this item openly available.  
Please [let us know](#) how this has helped you. Thanks!**

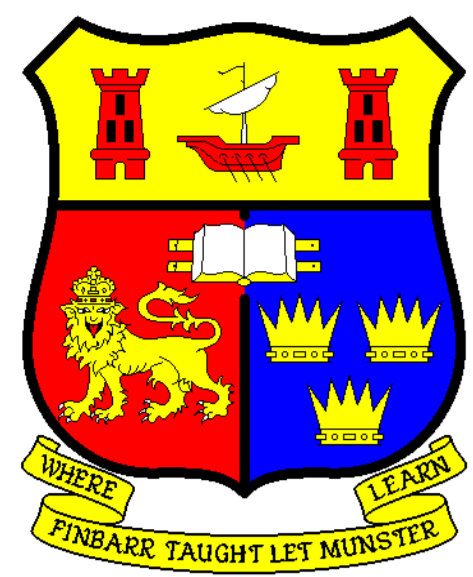
<b>Title</b>	Failure rates of class V restorations in the management of root caries in adults: a systematic review and meta-analysis
<b>Author(s)</b>	Hayes, Martina; Brady, Paul; Burke, Francis M.; Allen, P. Finbarr
<b>Publication date</b>	2013-07
<b>Original citation</b>	Hayes, M., Brady, P., Burke, F. M. and Allen, P. F. (2013) 'Failure rates of class V restorations in the management of root caries in adults: asystematic review and meta-analysis', 60th ORCA Congress: European Organization for Caries Research (ORCA), Liverpool, 3-6 July.
<b>Type of publication</b>	Conference item
<b>Link to publisher's version</b>	<a href="https://www.karger.com/Article/Pdf/350670">https://www.karger.com/Article/Pdf/350670</a> Access to the full text of the published version may require a subscription.
<b>Rights</b>	© 2013, the authors
<b>Item downloaded from</b>	<a href="http://hdl.handle.net/10468/2723">http://hdl.handle.net/10468/2723</a>

Downloaded on 2021-09-19T20:34:13Z



**UCC**

**University College Cork, Ireland**  
Coláiste na hOllscoile Corcaigh



# Failure rates of Class V restorations in the management of root caries in adults- A systematic review and meta-analysis

M Hayes\*, P Brady, FM Burke, PF Allen  
University College Cork, Ireland

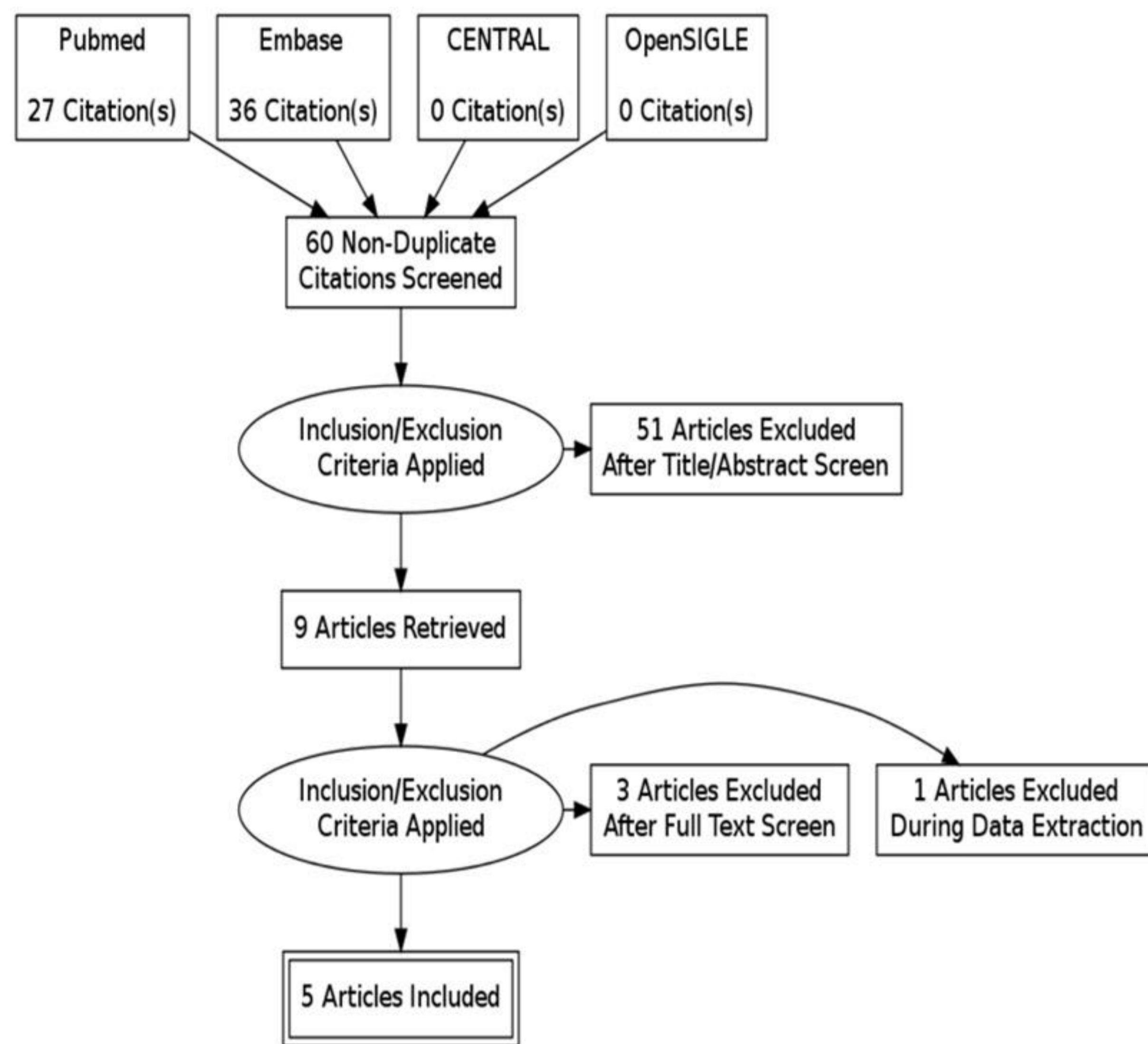


## Aim

To compare cumulative failure and recurrent caries rates of different restorative materials in carious class V lesions on the root surfaces of adult patients.

## Methods

The electronic databases of PubMed, Embase, Cochrane Register of Controlled Trials (CENTRAL), and the grey literature database of OpenSIGLE were searched. The search terms entered into PubMed were; "root caries" [Mesh] AND restorat\*.



Five studies met the pre-defined inclusion criteria. In total, 629 restorations were placed on the root surfaces of 304 participants.

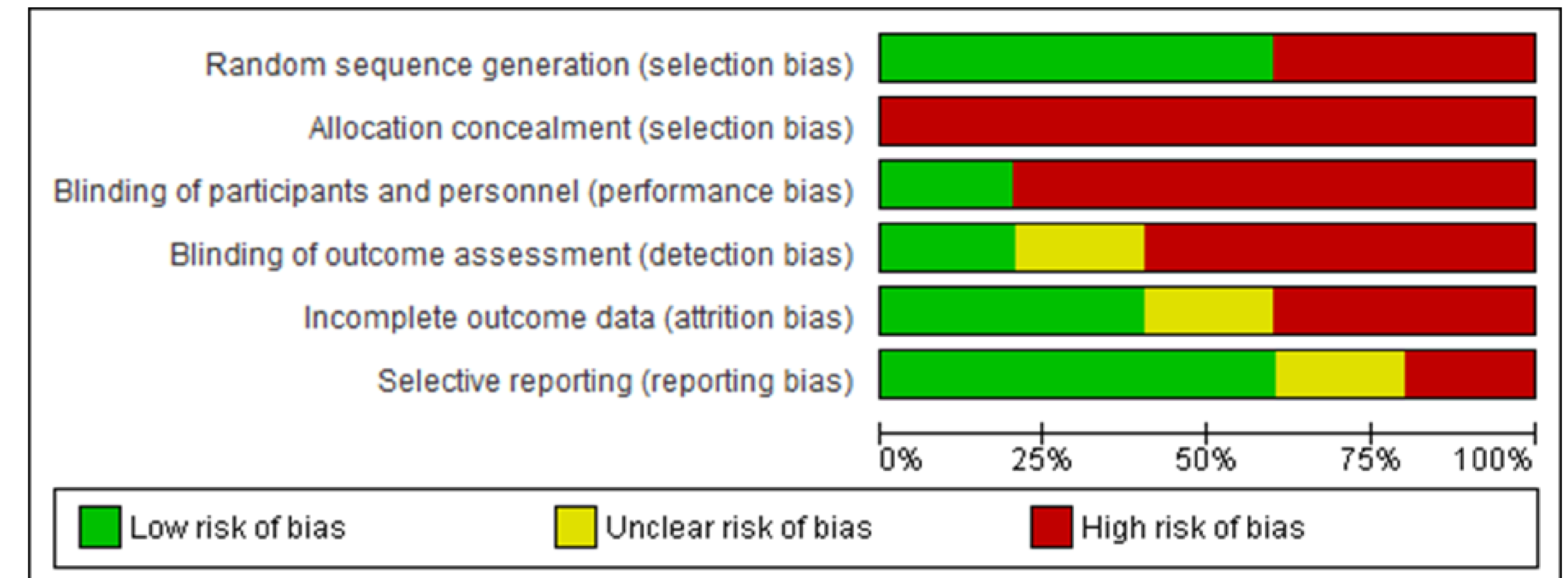
### Characteristics of included studies

	De Moor, 2011	Lo, 2006	McComb, 2002	Wood, 1993	Levy, 1990
<b>Country</b>	Belgium	China	Canada	Canada	United States
<b>Participants (n)</b>	35 (28 M, 7 F)	103 (31 M, 72F)	45	36	50 (24 M, 26 F)
<b>Type of Participants</b>	Post-radiation xerostomic adults with ≥ 3 lesions in same arch	Elders living in residential or nursing homes	Post-radiation xerostomic adults with ≥ 3 lesions in same arch	Post-radiation xerostomic adults with ≥2 lesions in same sextant	Adult volunteers with active root caries
<b>Interventions</b>	GIC* RMGIC* Composite	GIC RMGIC	GIC RMGIC Composite	GIC Amalgam	GIC Composite
<b>Allocated restorations</b>	30 GIC 30 RMGIC 30 Composite	78 GIC 84 RMGIC	50 GIC 50 RMGIC 50 Composite	54 GIC 54 Amalgam	45 GIC 59 Composite
<b>No. of restorations assessed at 12 months</b>	28 GIC 28 RMGIC 28 Composite	64 GIC 68 RMGIC	35 GIC 44 RMGIC 44 Composite	Not reported	Not reported
<b>No. of restorations assessed at 24 months</b>	27 GIC 27 RMGIC 27 Composite	59 GIC 63 RMGIC	28 GIC 21 RMGIC 20 Composite	35 GIC 35 Amalgam	33 GIC 44 Composite

\*GIC- Glass ionomer cement, RMGIC- Resin modified glass ionomer cement

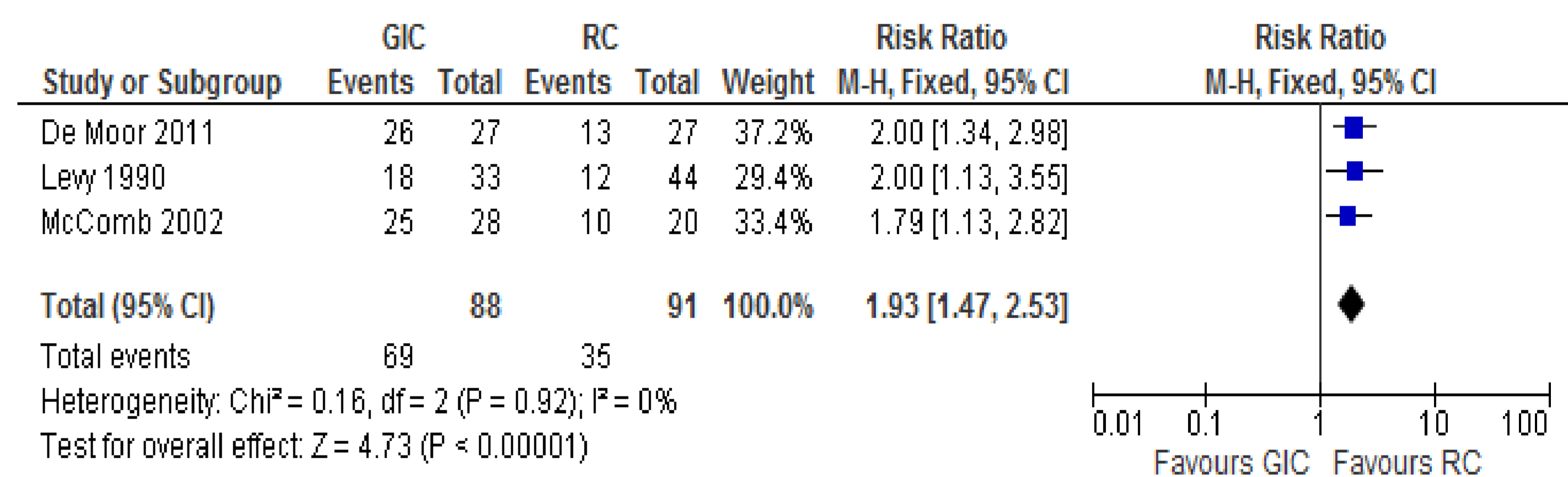
## Results

Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies

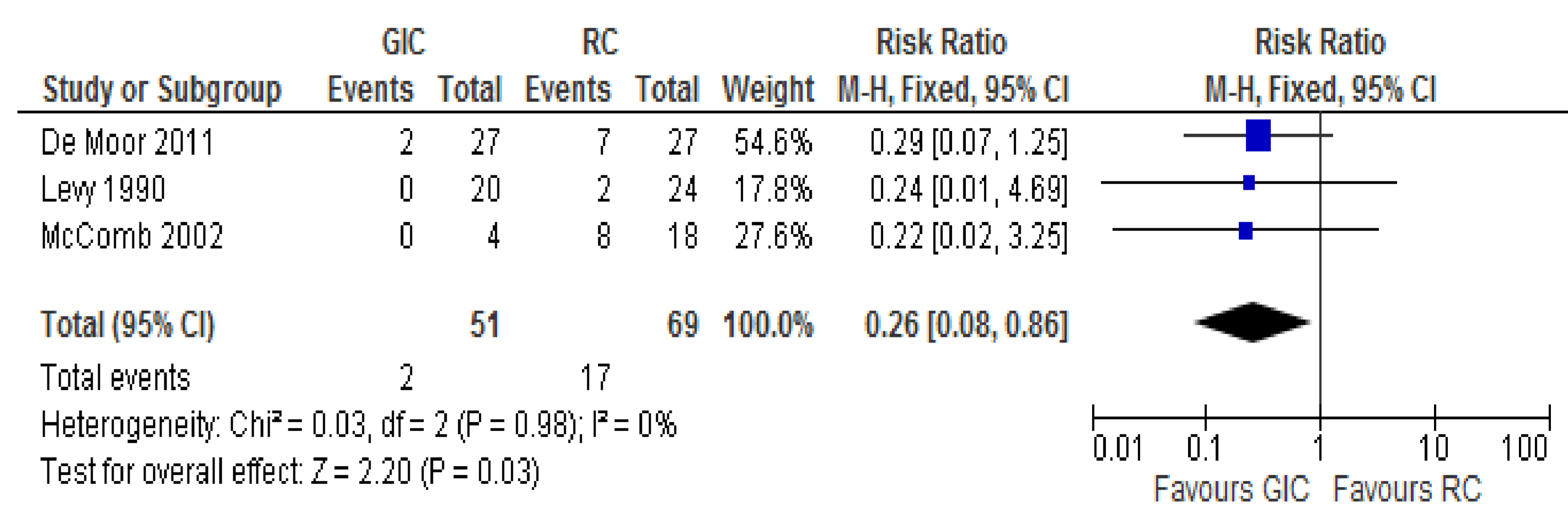


Resin composite showed a statistically significant lower cumulative failure rate at 24 months than either GIC or RMGIC. However, GIC showed a statistically significant lower recurrent caries rate at 24 months than resin composite.

Intervention: Glass ionomer cement vs Resin composite  
Outcome: Cumulative failure rates at 24 months



Intervention: Glass ionomer cement vs Resin composite  
Outcome: Failure due to marginal caries at 24 months



## Conclusions

There is a need for more randomized controlled trials in this area before any recommendations can be made. Most of the studies identified in this systematic review treated post-radiation, xerostomic patients which are not typical of the general population. In addition, increased adherence to CONSORT guidelines when reporting clinical trials would facilitate future systematic review.

## Funding

The presenting author (M Hayes) was supported by a research fellowship for healthcare professionals awarded by the Health Research Board in Ireland (HPF/2012/7).