

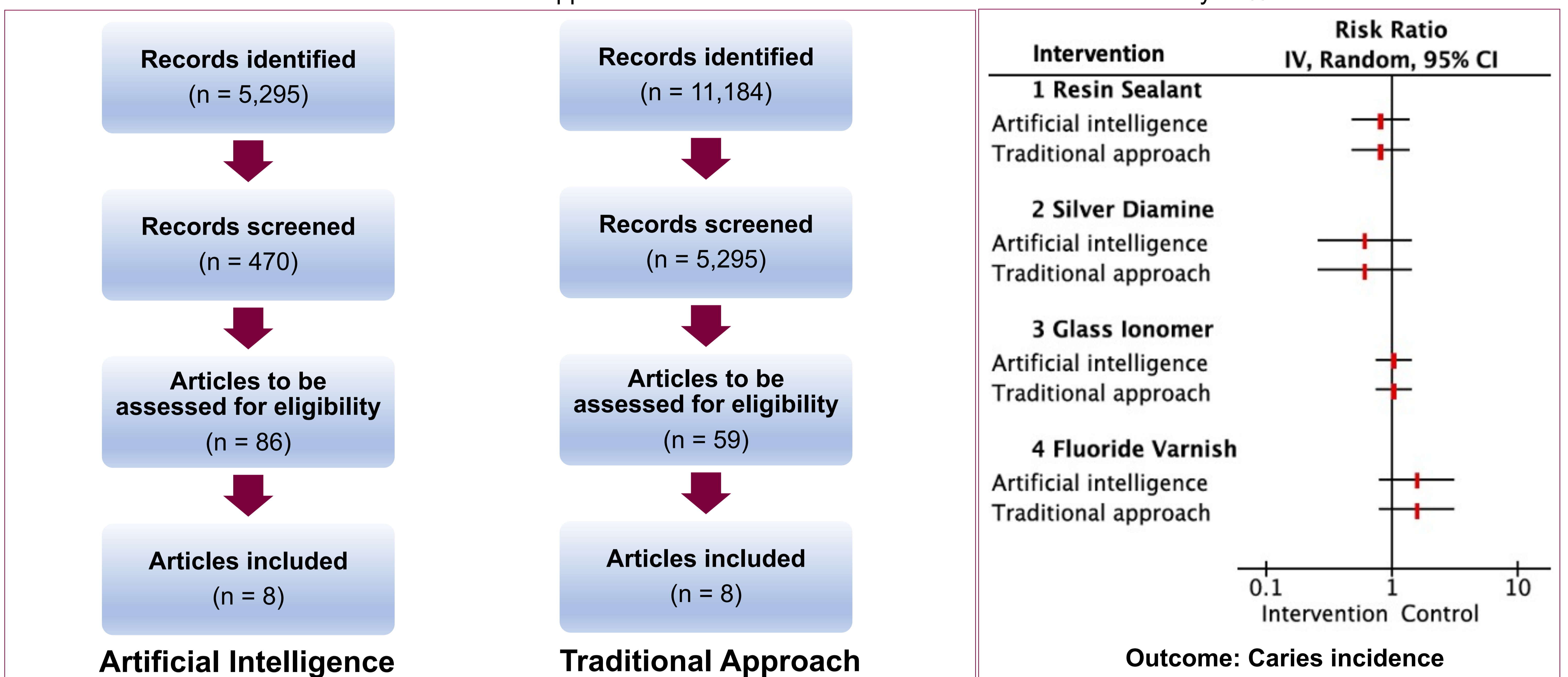
# Effect estimates using data abstraction from studies included with the AI approach are not importantly different than those from the traditional approach

## IMPACT OF THE USE OF ARTIFICIAL INTELLIGENCE ON CONCLUSIONS OF SYSTEMATIC REVIEWS

**Background:** Rapid reviews allow producing evidence for stakeholders timely. Therefore, review teams should seek mechanisms to streamline the methods without impacting the review's conclusions. The Sustainable Knowledge Platform is a new system that streamlines all the steps of evidence synthesis production, allowing users to incorporate artificial intelligence (AI) algorithms and other technologies in each process. This study aimed to compare the study selection performance of AI-assisted screening versus the traditional approach and to evaluate the effect estimates from meta-analyses obtained from both systems.

### Results

Both screening approaches identified all the included trials with a recall of 100%. The AI-assisted approach reduced the overall number of records to screen by 91%.



### Methods

#### Meta-epidemiological study

We used data abstracted from randomized trials included in the network meta-analysis about the prevention of occlusal caries in primary teeth

For the traditional approach, two researchers independently reviewed articles identified in the literature searches by examining them in the three consecutive phases of titles, abstracts and full-text.

For the AI approach, we aligned the components of the review question with the corresponding terms in the Epistemonikos taxonomy and applied AI classifiers to exclude potentially irrelevant records

Frequentist meta-analyses with random effects model using studies included by: 1) traditional approach (reference standard); 2) AI-assisted approach

To determine if there are important differences, we used the null effect as the threshold. We calculated the proportion of outcomes importantly different based on the point estimate or on the confidence interval

**Limitations:** This study identified only a few studies for each outcome, regardless of the approach. To confirm our results, future studies should use data from systematic reviews that consider other health problems.

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