



EPPI Centre
Evidence for
Policy & Practice



UCL

IQWiG Information Retrieval Meeting (IRM 2024): Software and data skills for information specialists

Introduction to OpenAlex tools for efficient automated updating of systematic reviews and maps

Ian Shemilt

EPPI Centre, University College London, United Kingdom

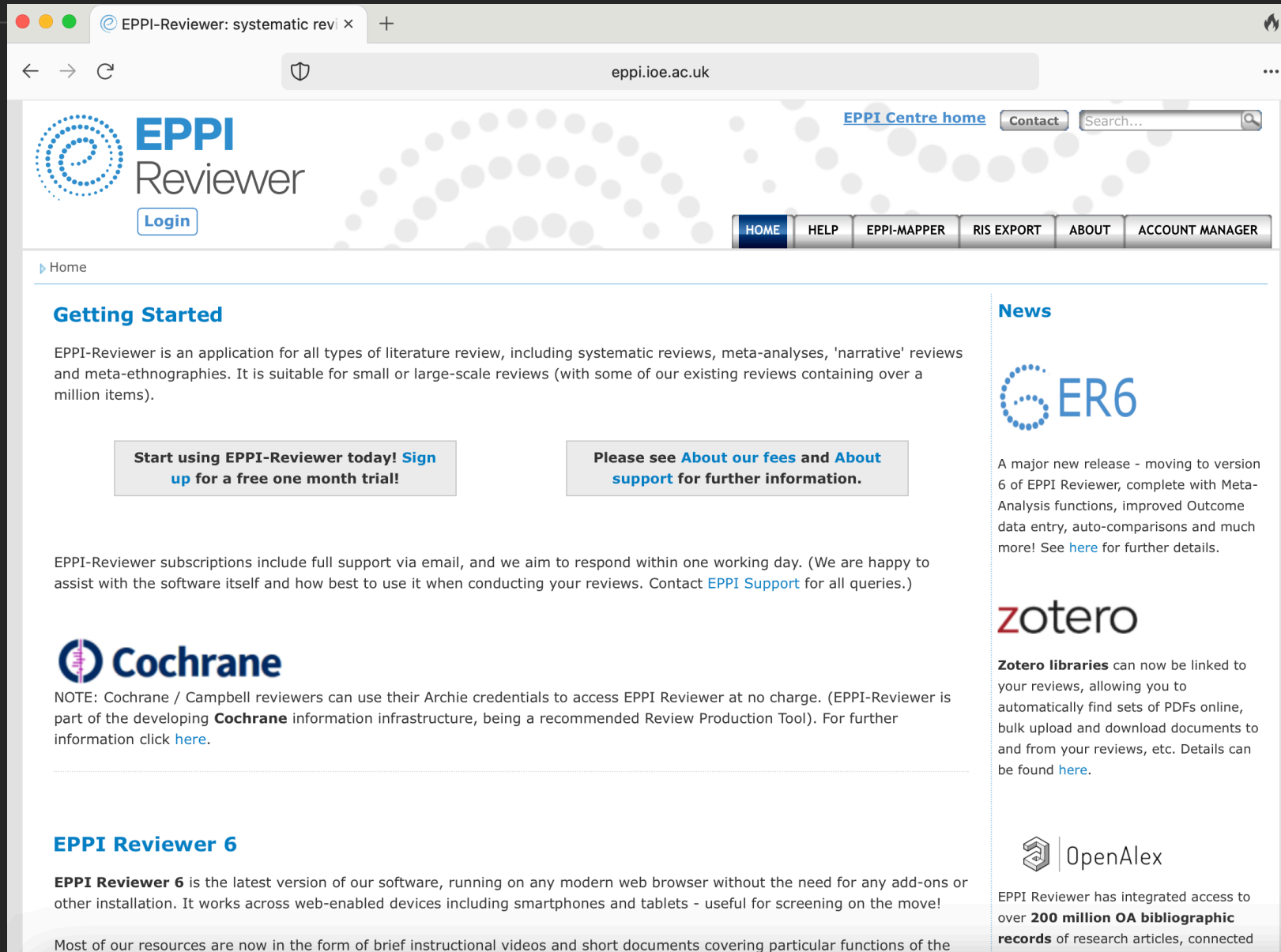
Conflict of interest disclosure

I have an interest that could be perceived as a direct conflict of interest in the context and content of this training workshop:

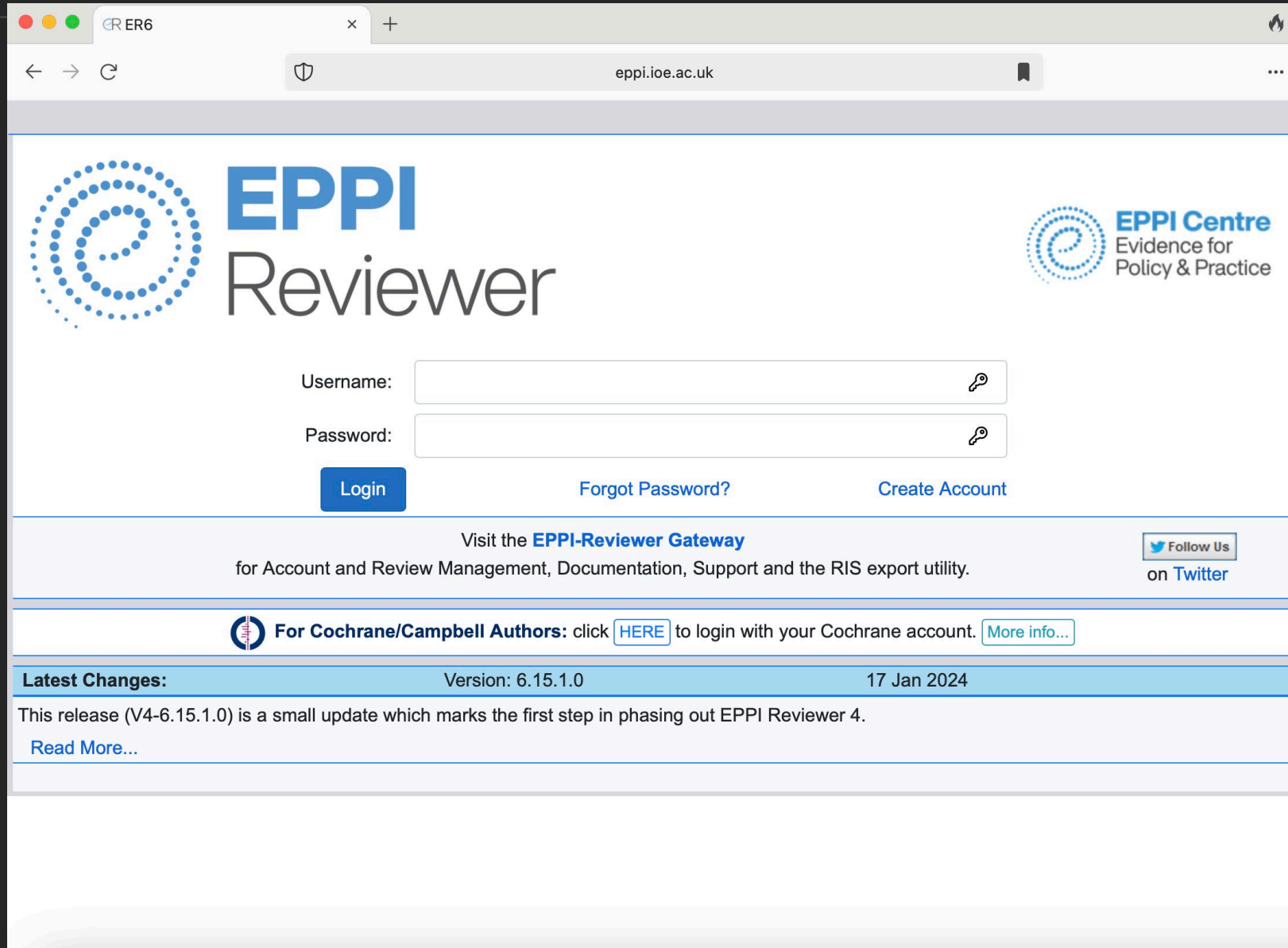
OpenAlex tools are hosted in EPPI Reviewer

I work at the EPPI Centre and help to develop and support this not-for-profit software

- Advanced web-based software for systematic reviews and other evidence synthesis
- Ordinarily licensed on a not-for-profit, software as service, subscription basis
- Some users charged fees for access, shareable reviews, direct support or training
- Free at the point of use to all Cochrane authors for use to produce Cochrane reviews
- Open source = “coming soon” (late Summer 2024 🙌)



The screenshot shows a web browser window with the URL `eppi.ioe.ac.uk`. The page features the EPPI Reviewer logo and a navigation menu with links for HOME, HELP, EPPI-MAPPER, RIS EXPORT, ABOUT, and ACCOUNT MANAGER. The main content area is titled "Getting Started" and includes a "Login" button. Two call-to-action boxes encourage users to start using the software today and to see information about fees and support. A "News" section highlights the release of EPPI Reviewer 6, mentioning new features like Meta-Analysis functions and improved data entry. Below this, there are sections for Cochrane integration and Zotero library linking. At the bottom, there is a section for EPPI Reviewer 6, noting its compatibility with modern web browsers and mobile devices. The footer of the page mentions that resources are now in the form of instructional videos and short documents.



The screenshot shows a web browser window with the address bar displaying `eppi.ioe.ac.uk`. The page features the EPPI Reviewer logo on the left and the EPPI Centre logo on the right. The main content area contains a login form with fields for Username and Password, each with a password visibility icon. Below the form are three links: Login, Forgot Password?, and Create Account. A banner below the form invites users to visit the EPPI-Reviewer Gateway for account management and other utilities, with a Follow Us button on Twitter. A section for Cochrane/Campbell Authors provides a link to login with a Cochrane account. A 'Latest Changes' section highlights version 6.15.1.0, dated 17 Jan 2024, as a small update phasing out EPPI Reviewer 4, with a Read More... link.

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Acknowledgements



EPPI Centre, University College London, UK

- James Thomas
- Sergio Graziosi
- Patrick O'Driscoll



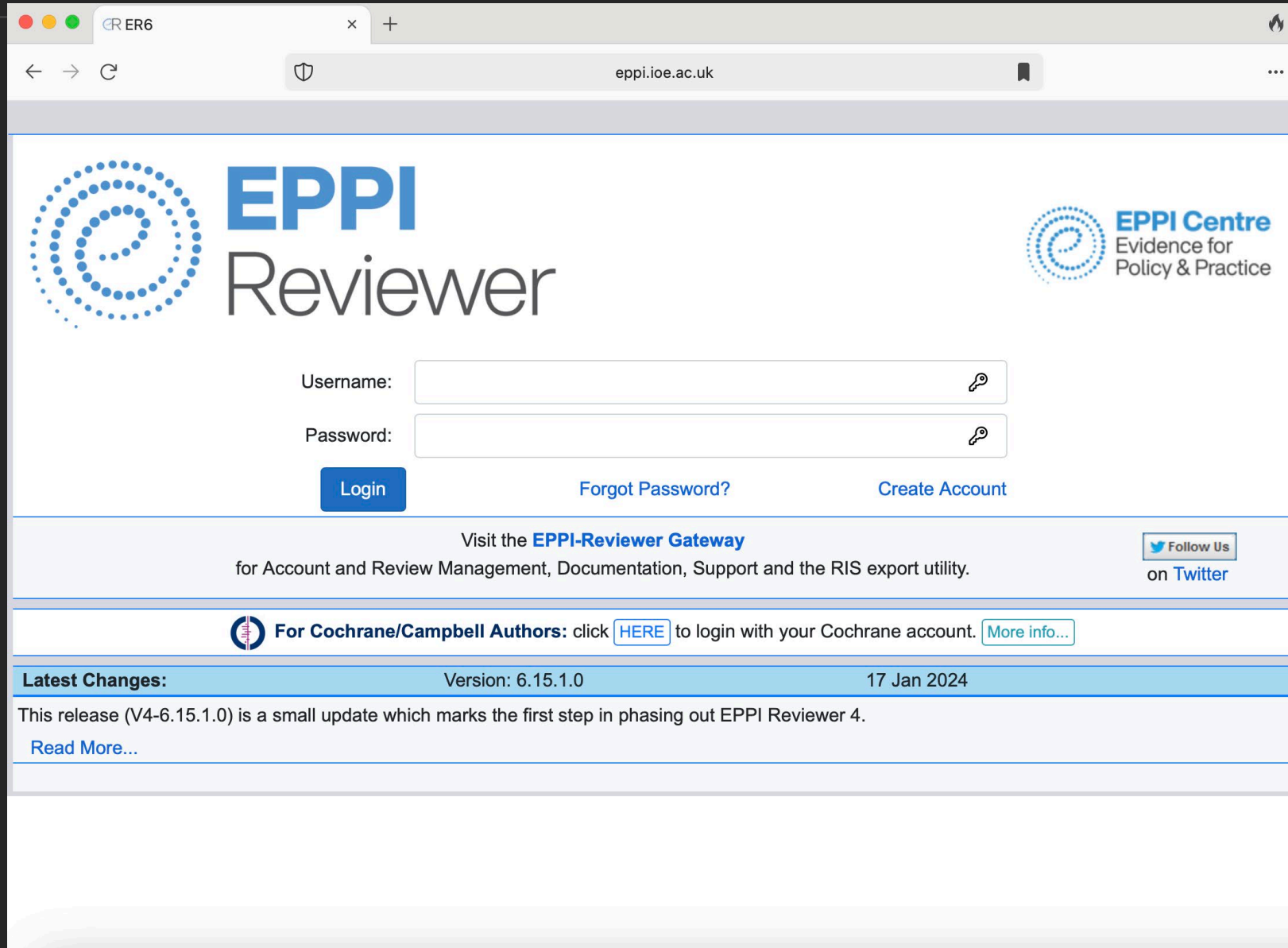
Cloud Architect Data & AI, Microsoft Corps., Italy

- Paolo Tenti
- Omri Mendels
- Nava Vaisman Levy
- Katya Mustafini
- Ehsan Zare Borzeshi

About me

- EPPI Centre at University College London (UCL)
- Methods for systematic reviews and other forms of evidence synthesis → policy & practice decisions
- Automation tools and new technologies for increasing the efficiency of rigorous systematic review and evidence synthesis processes (≠ ‘rapid reviews’)







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CR ER6

eppi.ioe.ac.uk



EPPI Centre
Evidence for
Policy & Practice


Username:

Password:

[Login](#) [Forgot Password?](#) [Create Account](#)

Visit the [EPPI-Reviewer Gateway](#)
for Account and Review Management, Documentation, Support and the RIS export utility.

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 **For Cochrane/Campbell Authors:** click [HERE](#) to login with your Cochrane account. [More info...](#)

Latest Changes: Version: 6.15.1.0 17 Jan 2024

This release (V4-6.15.1.0) is a small update which marks the first step in phasing out EPPI Reviewer 4.
[Read More...](#)

About you

- Ever seen EPPI Reviewer?
- Ever used EPPI Reviewer?
- Regular user of EPPI Reviewer?
- Ever seen or used OpenAlex tools?



Outline

1. Introduce OpenAlex tools (~15 mins)
2. Demonstrate OpenAlex tools for updating an IQWiG evidence search (~30 mins)
3. Try to answer your questions! (~15 mins)



Systematic reviews



This Photo by Unknown Author is licensed under [CC BY](https://creativecommons.org/licenses/by/4.0/)

- Identify, appraise and synthesize **all** the evidence (*research studies*) that meets pre-specified eligibility criteria to **answer a specific research question**
- Explicit, systematic methods aimed at minimising bias, to produce more reliable findings to inform decision-making
- Stages of the SR process:
 - Formulating questions and eligibility criteria
 - Searching for eligible studies
 - Selecting eligible studies
 - Coding included study characteristics & extracting data
 - Assessing risk of bias / quality of included studies
 - Synthesising data from included studies
 - Assessing certainty of evidence
 - Interpreting results and summarising findings

Evidence and gap maps

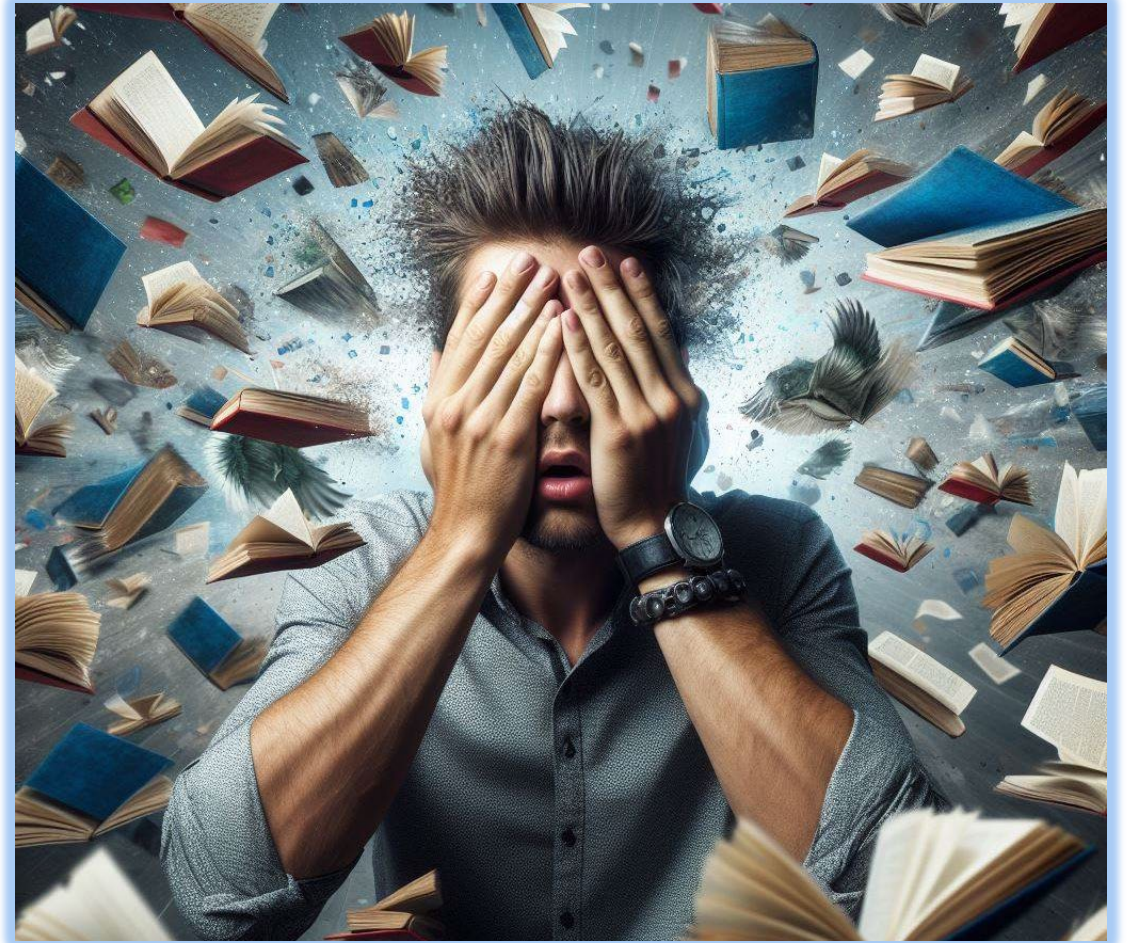


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- Identify and describe a representative majority of (**almost all**) the evidence that meets pre-specified eligibility criteria to provide **an overview of a broad area of research**
- Use explicit, systematic methods aimed at minimising bias, to produce more reliable findings to inform decision-making
- Stages of the mapping (EGM) process:
 - Formulating questions and eligibility criteria
 - Searching for eligible studies
 - Selecting eligible studies
 - Coding included study characteristics & extracting data
 - Assessing risk of bias / quality of included studies ???
 - ~~Synthesising data from included studies~~
 - ~~Assessing certainty of evidence~~
 - Visualising results and summarising findings

Automating evidence synthesis

- Conventional evidence synthesis production processes, undertaken manually, are time and resource intensive
- They can therefore take a long time to produce, making it difficult to 'land' evidence at the 'point' of decisions
- Findings can also become quickly out of date - especially where bodies of evidence are rapidly emerging
- More efficient = reducing time and costs, while maintaining rigor and reliability (≠ 'rapid reviews')
'earning the grounds for the evidence claims'



Keeping living reviews & maps up to date



- Increasing awareness of the need to keep evidence synthesis up to date
- Evidence is rapidly emerging, current knowledge is uncertain, new research might change policy or practice
- Requires continual evidence surveillance
- Need for living evidence synthesis (capacity and tools!) was highlighted during the COVID-19 pandemic

[Home](#)
[All records](#)
[Logout](#)

List records

Frequencies

▼ Topic

- Treatment evaluation
- Transmission / risk / prevalence
- Diagnosis
- Health impacts
- Vaccine development
- Treatment development
- Genetics / biology
- Case reports (patients)
- Case study - organisation
- Social / economic / indirect impacts
- Mental health impacts

▼ Version

- All versions
- Version 106 - 10th October 2023
- Version 105 - 12th July 2023

COVID-19: Living map of the evidence

Introduction +

Frequencies: Topic -

Table
Bar
Pie
Table (new page)
Save

Topic	Frequency (approx.)
Treatment evaluation	5,000
Transmission / risk / prevalence	25,000
Diagnosis	10,000
Health impacts	45,000
Vaccine development	10,000
Treatment development	10,000
Genetics / biology	8,000
Case reports (patients)	25,000
Case study - organisation	15,000
Social / economic / indirect impacts	85,000
Mental health impacts	22,000

Show uncoded

Publications by year +

Maps(3D) & Crosstabs(2D) +

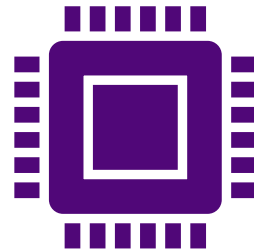
The NIHR Policy Research Programme Reviews Facility is a collaboration between the following:

EPPI-Vis is developed and maintained by the EPPI-Centre. The data shown is retrieved in real time from the EPPI-Reviewer database.

Enablers of a new generation of digital (living) evidence synthesis tools



Increased availability of open access research

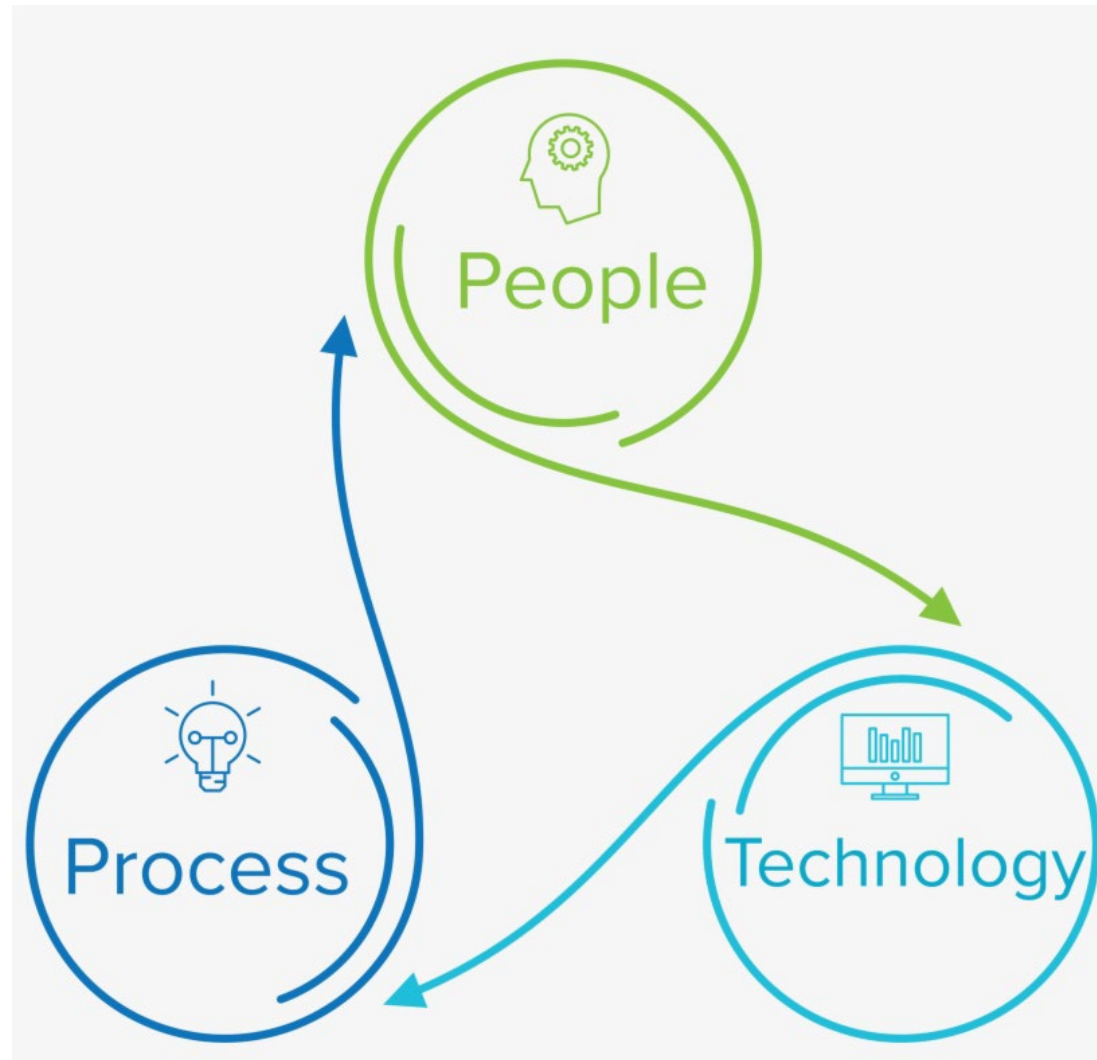


Increased computing power (both memory + compute)

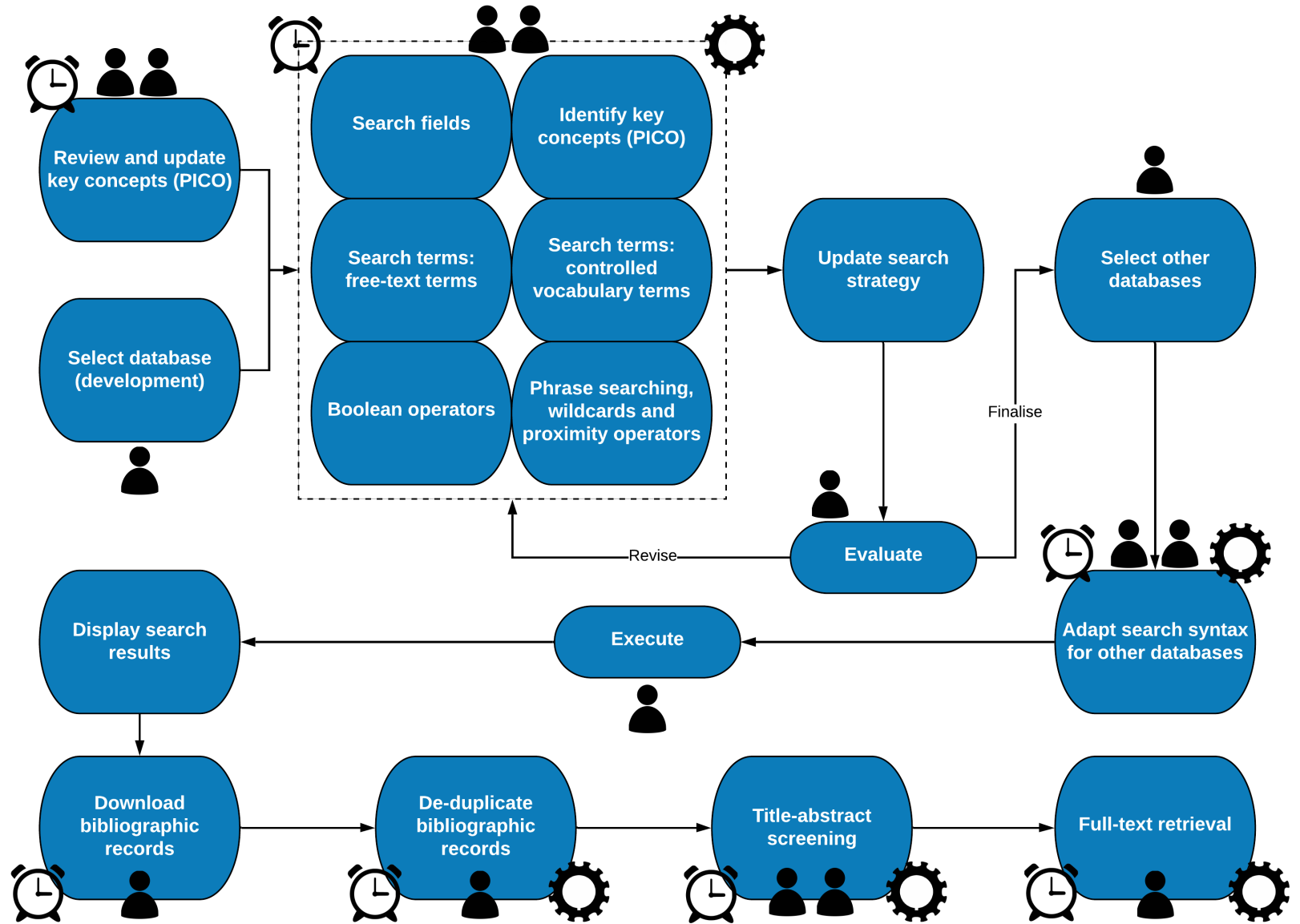


Advances in machine learning technology

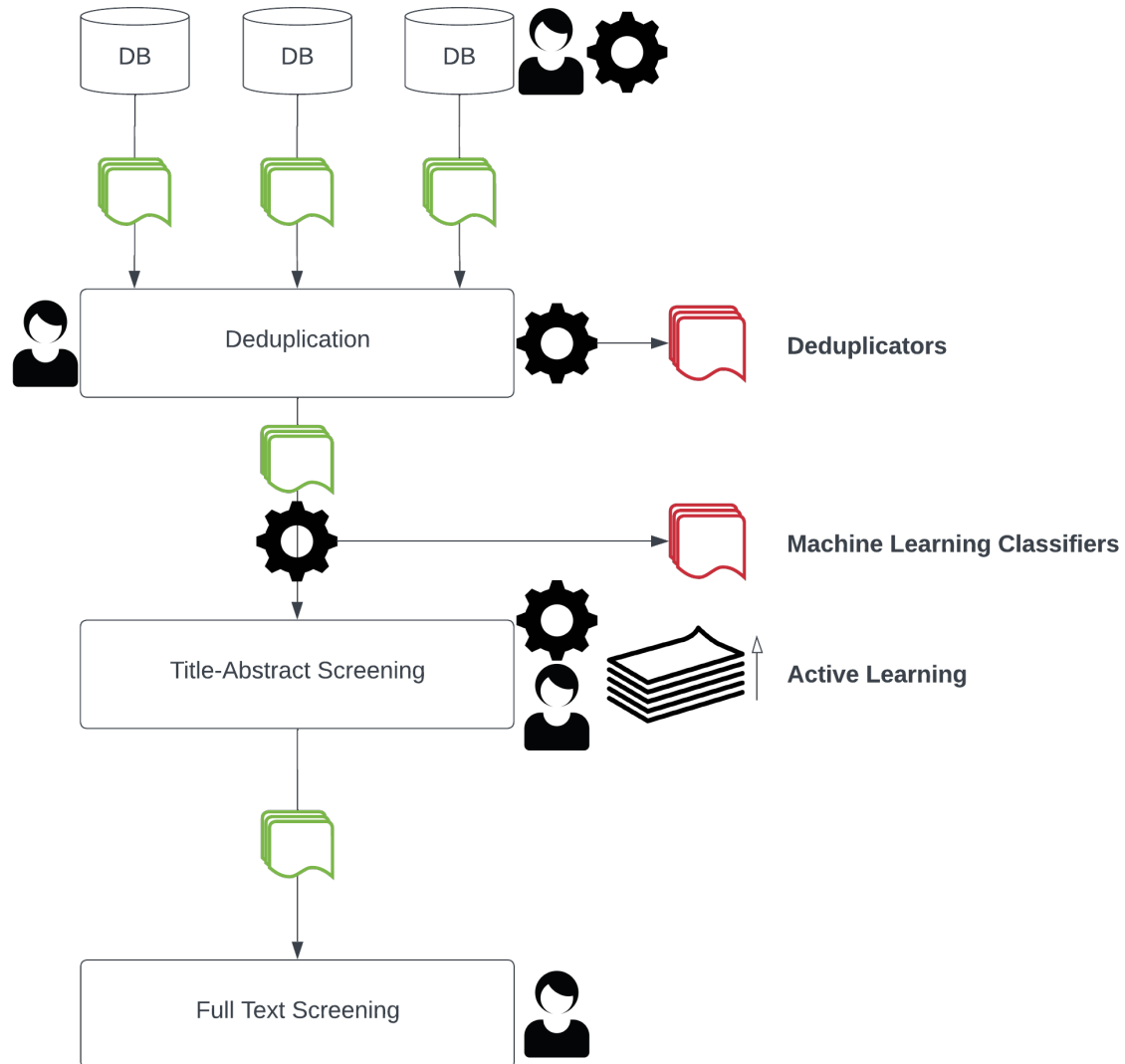
Automation \approx semi-automation



Standard information retrieval workflow for updating an (L)SR



Automation tools for study identification





OpenAlex



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Large 'network graph' dataset comprising >250M bibliographic records of research articles from across science



Open access – updated daily



Close-to-comprehensive coverage of journal articles




Key gaps for SRs and related use scenarios

- Trials registry records
- Conference abstracts
- Dissertations and Theses
- Grey literature

Current stats

Last updated Tue Apr 23 2024

252M Works ⓘ 56M Open Access works 31M from the Global South 4M datasets	92M Authors ⓘ 5M with ORCIDs 12M from the Global South	255K Sources ⓘ 45K that are Open Access
10K Publishers ⓘ	32K Funders ⓘ	108K Institutions ⓘ
65K Concepts ⓘ	5K Topics ⓘ	252 Subfields ⓘ
26 Fields ⓘ	4 Domains ⓘ	17 Sdgs ⓘ
247 Countries ⓘ	7 Continents ⓘ	184 Languages ⓘ
18 Types ⓘ	6 Source-Types ⓘ	8 Institution-Types ⓘ

 OpenAlex Explore About 

Overview

Testimonials


Coverage stats

Sources

OpenAlex is not doing this alone! Rather, we're aggregating and standardizing data from a whole bunch of other great projects, like a river fed by many tributaries. Our two most important data sources are [MAG](#) and [Crossref](#). Other key sources include:

- [ORCID](#)
- [ROR](#)
- [DOAJ](#)
- [Unpaywall](#)
- [Pubmed](#)
- [Pubmed Central](#)
- [The ISSN International Centre](#)
- Subject-area and institutional repositories from [arXiv](#) to [Zenodo](#) and everywhere in between.

You can get the full list of sources [using our API](#).


 OpenAlex




 Explore


 About ^

Overview

Testimonials

Coverage stats


 Learn more ∨

 Connect ∨

 Upgrade

Comparison with other scholarly data sources

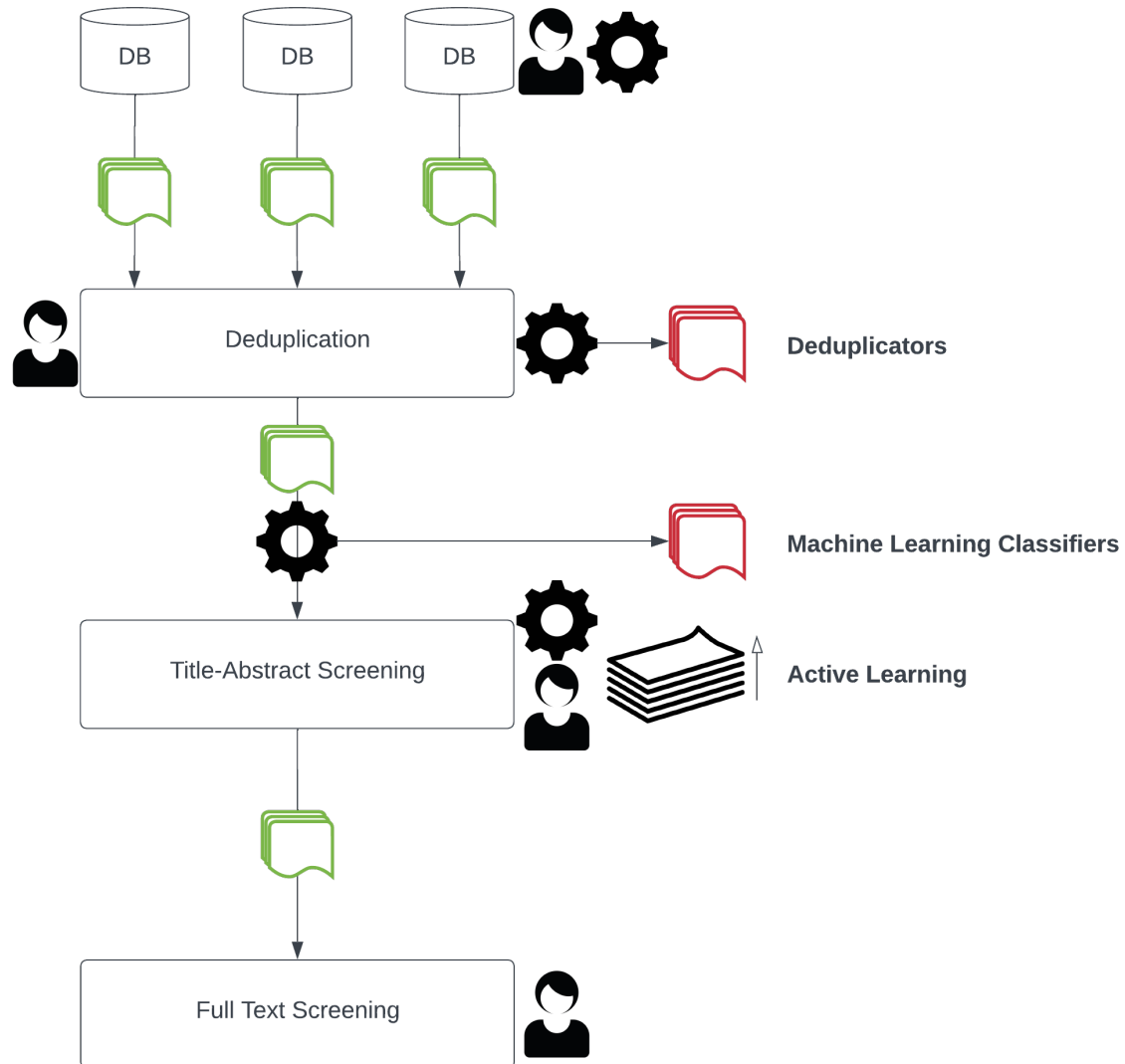
How does OpenAlex compare to other scholarly data sources like Dimensions, Scopus, Google Scholar, etc.?

That is a big question! There are many ways to measure this, and we encourage you to try out the different options to see what is best for you.

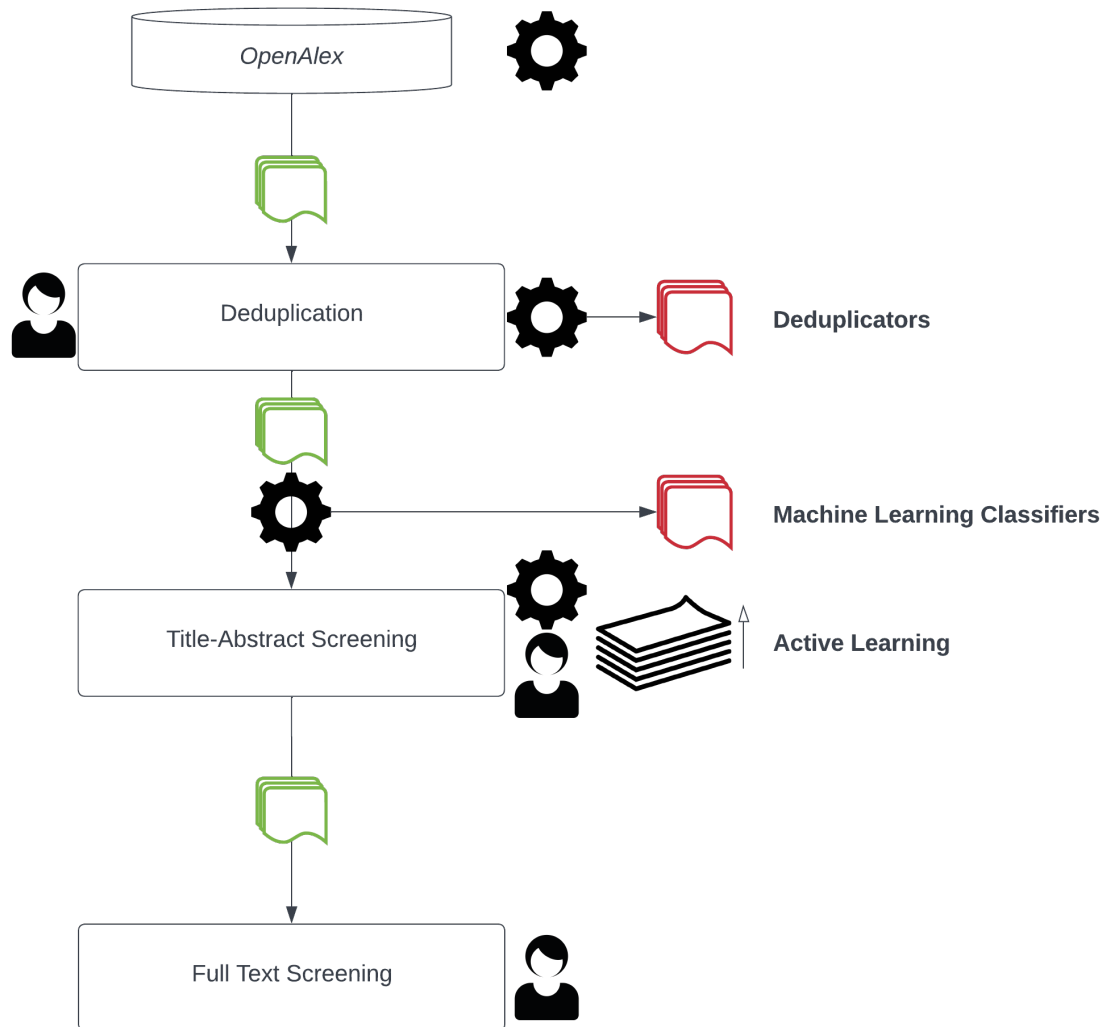
Here we offer a comparison of some of the different options available, across just a few aspects:

	Number of works	Open Access works	Citations	Price	Data Openness	Org structure
OpenAlex	243M	48M	1.9B	Freemium	Fully open, CC0 license	Non-profit
Scopus	87M	20.5M (ref)	1.8B	Subscription	Closed	For Profit
Web of Science (core)	87M (ref)	12M (ref)	1.8B	Subscription	Closed	For Profit
Dimensions	135M	29M (ref)	1.7B	Freemium	Partly open, personal use	For Profit
Google Scholar	389M (estimated)	?	?	Free	Closed	For Profit
Crossref	145M	20M	1.45B	Free	Fully open, CC0 license	Non-profit

Automation tools for study identification



Automation tools for study identification



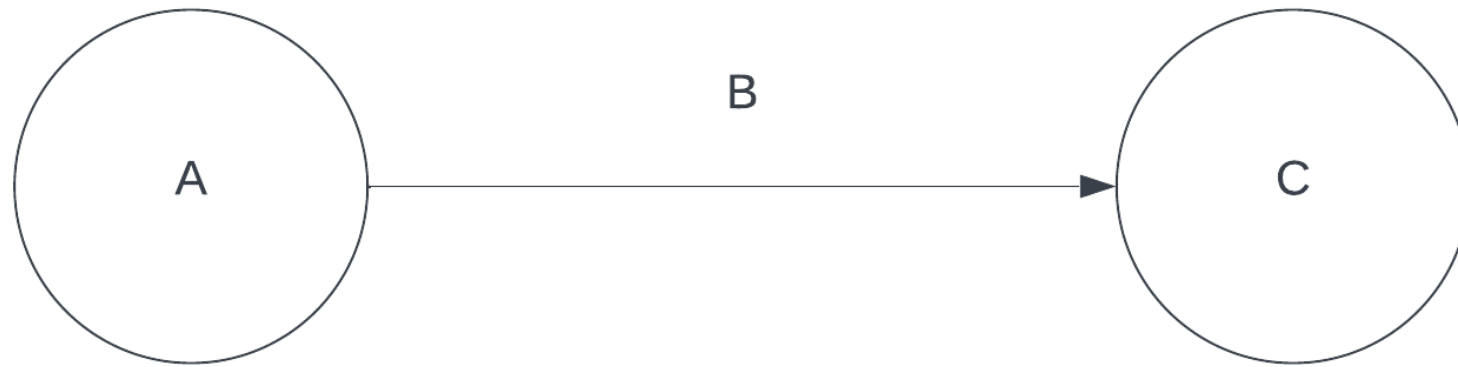
OpenAlex methods research questions

1. Does OpenAlex contain the study reports we need to identify for systematic reviews, maps and other evidence syntheses? (*Recall*)
2. Can we use OpenAlex to efficiently identify the study reports we need for systematic reviews, maps and other evidence syntheses?
(*Precision*)

OpenAlex = A large knowledge graph for open access research



Knowledge graphs for open access research



Knowledge graphs for open access research

RHEUMATOLOGY
Original article

The validation of a diagnostic rule for gout without joint fluid analysis: a prospective study

Laura B. E. Kienhorst¹, Hein J. E. M. Janssens^{2,3}, Jaap Franssen⁴ and Matthijs Janssen¹

Abstract
Objective. The gold standard for diagnosing gout is the identification of MSU crystals in joint fluid. In secondary care, the facilities or expertise to analyse joint fluid are not always available and gout is diagnosed clinically. To improve the predictive value of the clinical diagnosis of gout in secondary care, a diagnostic rule developed in primary care could be helpful. The aim of this study was to validate this diagnostic rule in a secondary care population with the gold standard as reference rule.
Methods. Three hundred and twenty patients with monoarthritis were included. The variables of the diagnostic rule (male sex, previous arthritis attack, onset <1 day, joint redness, involvement of the first MTP joint, hyperuricaemia or one or more cardiovascular diseases, and serum uric acid <5.8 mg/dl) were collected and scored. The affected joint was aspirated and joint fluid was analysed for the presence of MSU crystals.
Results. In 219 patients (66%) MSU crystals were found. The positive predictive value of a score of ≥8 points was 0.82, the negative predictive value of a score of <4 points was 0.92. The area under the receiver operating characteristic curve for the diagnostic rule was 0.88 (95% CI 0.82, 0.93). The Receiver-Lambdaone goodness-of-fit test showed that the difference between the expected and the observed probability was non-significant (P=0.86), indicating good agreement.
Conclusion. An easy-to-use diagnostic rule to gout developed in primary care shows good performance in secondary care and improves the predictive value of the clinical diagnosis of gout when joint fluid analysis is not available.
Key words: gout, diagnosis, diagnostic rule, joint fluid, uric acid.

Introduction
Gout is a common problem that affects 1.4% of the population (1). The gold standard for diagnosing gout is the identification of MSU crystals in joint fluid by polarisation microscopy (2). It is therefore this the gold standard. In some patients, joint fluid analysis is not performed (3). Joint fluid analysis may take in arthrocentesis, the invasiveness of polarisation microscopy and laminary with the use of this microscope. In primary care (4), but also in secondary care of emergency or other non-rheumatology departments, the facilities or expertise to analyse joint fluid are not always available. Even rheumatologists often lack these facilities or expertise (5). In that case, gout is diagnosed based on clinical signs and symptoms only. However, it has been shown that the validity of the clinical diagnosis of gout in primary care is limited (patients' predictive value (PV) 0.64 and negative predictive value (NPV) 0.81) (2). To improve the predictive value of the clinical diagnosis of gout in primary care, a diagnostic rule (6) (7) could be developed (2). This diagnostic rule includes scores for the following seven variables: male sex, previous arthritic episode, arthritis attack, onset within 1 day, joint redness, involvement of the first MTP joint (MTP-1), hyperuricaemia or one or more cardiovascular diseases (8) (9) and serum uric acid <5.8 mg/dl (10) (11). The total score of the

Cited By

Clin Rheumatol (2014) 33:555–559
DOI: 10.1007/s10067-014-2955-4
ORIGINAL ARTICLE

Additive value for ultrasonographic signal in a screening algorithm for patients presenting with acute mono-oligoarthritis in whom gout is suspected

F. B. G. Laurs-Karabach¹, F. L. C. M. Van Riel¹, T. L. Jansen¹

Received: 7 January 2014 / Accepted: 17 January 2014 / Published online: 9 February 2014
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Abstract Crystal arthritides such as gout can be detected by ultrasonography (US). This study reveals the performance of joint US (double contour sign (DCS), tophi (T), hyperechoic spots or ‘snow storm’ (SS)) for diagnosing gout and calcium pyrophosphate dihydrate crystal deposition disease (CPPD) in patients with acute mono- or oligoarthritis (MOA). The gold standard is the presence of monosodium urate (MSU) (CPPD crystals) (by fine needle aspirates) but in acute MOA, US was performed on the following six joints maximum: the articular joint, the carpal tunnel side, metatarsophalangeal (MTP-1), and knee bilaterally in case of arthritis in one of these joints. In case of first/second CPPD arthritis, the knee and MTP-1 were examined. These were examined for DCS, T, SS, and interdigital sign (IDS). Synovial fluid was aspirated from the affected joint for MSU proof. Twenty-six of the 54 (48 %) patients with MOA had MSU-proven gout. Sensitivity of DCS and any US abnormality (DCS, T, SS) was 77 and 96 %, respectively. The positive likelihood ratio (LR+) for DCS and any ultrasonographic abnormality (Cohen's κ) was 1.08 and 2.91, respectively, and the LR- was 0.31 and 0.06, respectively. MSU-proven gout patients where the affected joint is not MTP-1, MTP-1 still showed tophi in 42 % of the patients. None of the CPPD patients had an interdigital sign. In deduced hands, ultrasonography detects a phlegm early in a screening algorithm of MOA patients, particularly if specificity is high enough to make patients abundant or when microscopy is not available. In 94 % of the MSU-proven gout patients, the DCS is not present in another joint other than the affected or MTP-1 joint.

Keywords Double contour sign and diagnostic imaging · Gout · Mono- or oligoarthritis · Ultrasonography

Introduction
Acute arthritis deserves direct rheumatology attention to establish the cause as soon as possible. Concerns have been raised for potential over diagnosis of rheumatoid arthritis (RA) with the use of newer diagnostic algorithms emphasizing sensitivity over specificity (1–3). In populations with a high prevalence of crystal arthritis, this may be the case. With arthrocentesis and additional analysis of the synovial fluid, the crystal diagnosis and management can easily be obtained if microscopy are available. The identification of monosodium urate (MSU) crystals in the synovial fluid or tophi was assumed to be the gold standard. This is ideally performed in the acute phase of arthritis or by puncturing a tophus suspected to be tophiaceous (1). Other, arthrocentesis and polarisation microscopy is not easily organized, as the ubiquitous availability of polarised light microscopy is not optimal. Next to that, medical complications may hamper performing arthrocentesis in certain parts of the world. The advantages of an ultrasonography scan are no radiation for the patient, hardly time-consuming, and detecting early tophiaceous accumulation subcutaneously and in deeper tissues. Conventional radiography shows only late effects of gout (established disease). So it will not help to diagnose gout in the early stage of the disease. During the last decade, several studies have suggested potentials for ultrasonography (US) in rheumatologic assessment of arthritis (4–11). The following question is therefore important: Is ultrasonography a valuable option in a diagnostic strategy of arthritis? Is gout and calcium pyrophosphate dihydrate crystal

Report ('Work') 1

Report ('Work') 2

Knowledge graphs for open access research

RHEUMATOLOGY
Original article

The validation of a diagnostic rule for gout without joint fluid analysis: a prospective study

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Methods. Three hundred and twenty patients with monoarthritis were included. The variables of the diagnostic rule (male sex, previous arthritis attack, onset <1 day, joint redness, involvement of the first MTP joint, hyperuricaemia or one or more cardiovascular diseases, and serum uric acid <5.8 mg/dl) were collected and scored. The affected joint was aspirated and joint fluid was analysed for the presence of MSU crystals.
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Concept (Topic)

'Gout'

Report ('Work') 1

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 DOI: 10.1007/s10067-014-2954-4
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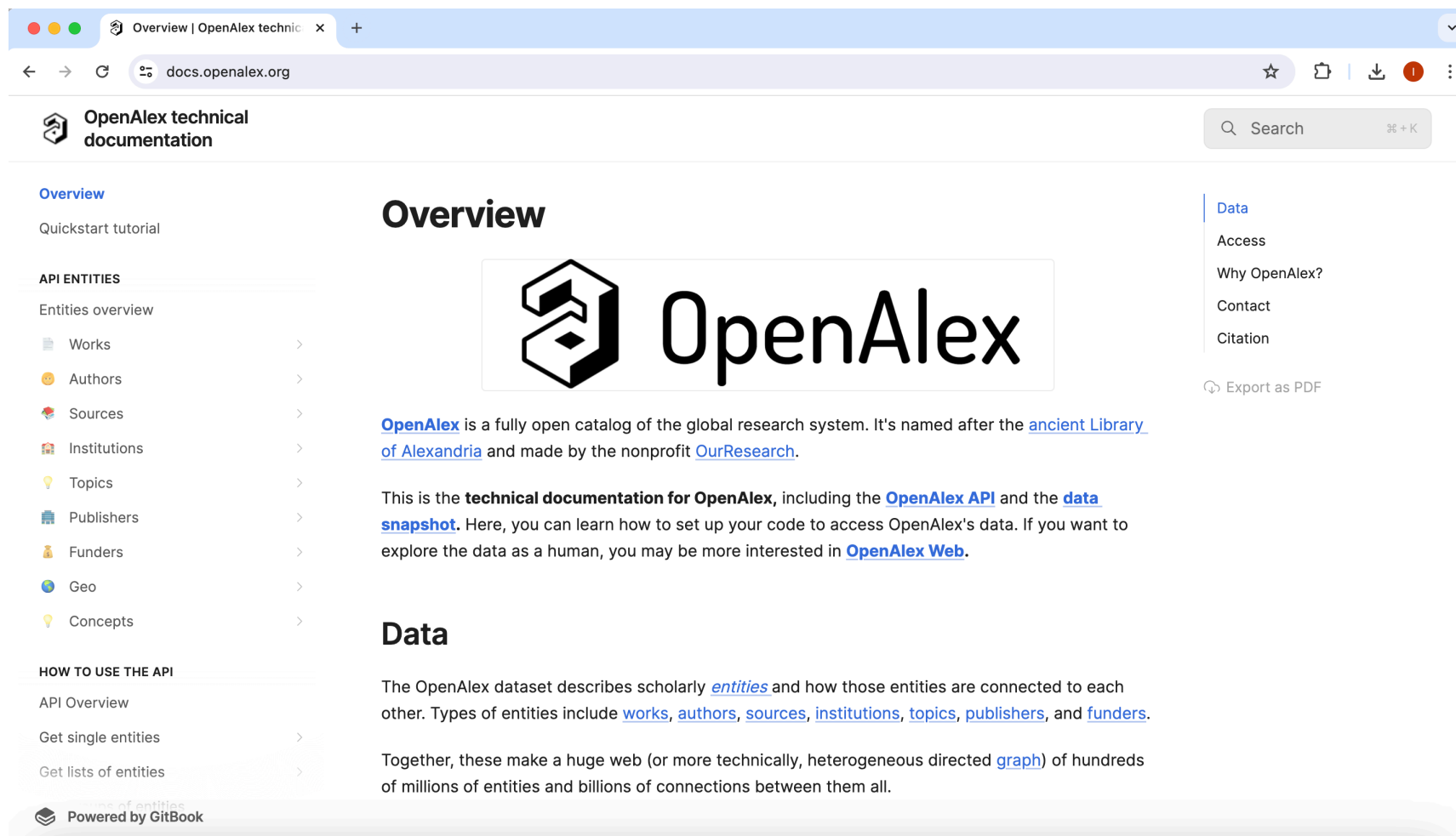
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Report ('Work') 2

OpenAlex = A large knowledge graph for open access research



The screenshot shows a web browser window displaying the OpenAlex technical documentation website. The browser's address bar shows the URL docs.openalex.org. The page features a navigation sidebar on the left with sections for Overview, API ENTITIES (listing Works, Authors, Sources, Institutions, Topics, Publishers, Funders, Geo, and Concepts), and HOW TO USE THE API (listing API Overview, Get single entities, and Get lists of entities). The main content area is titled "Overview" and includes the OpenAlex logo, a search bar, and a list of links: Data, Access, Why OpenAlex?, Contact, and Citation. A "Data" section is highlighted, containing text about the OpenAlex dataset and its entities. A "Data" section is also visible on the right side of the page, with a link to "Export as PDF".

OpenAlex technical documentation

Overview

Quickstart tutorial

API ENTITIES


- Entities overview
 - Works
 - Authors
 - Sources
 - Institutions
 - Topics
 - Publishers
 - Funders
 - Geo
 - Concepts

HOW TO USE THE API

- API Overview
- Get single entities
- Get lists of entities

Powered by GitBook

Overview



OpenAlex

[OpenAlex](#) is a fully open catalog of the global research system. It's named after the [ancient Library of Alexandria](#) and made by the nonprofit [OurResearch](#).

This is the **technical documentation for OpenAlex**, including the [OpenAlex API](#) and the [data snapshot](#). Here, you can learn how to set up your code to access OpenAlex's data. If you want to explore the data as a human, you may be more interested in [OpenAlex Web](#).

Data

The OpenAlex dataset describes scholarly [entities](#) and how those entities are connected to each other. Types of entities include [works](#), [authors](#), [sources](#), [institutions](#), [topics](#), [publishers](#), and [funders](#).

Together, these make a huge web (or more technically, heterogeneous directed [graph](#)) of hundreds of millions of entities and billions of connections between them all.

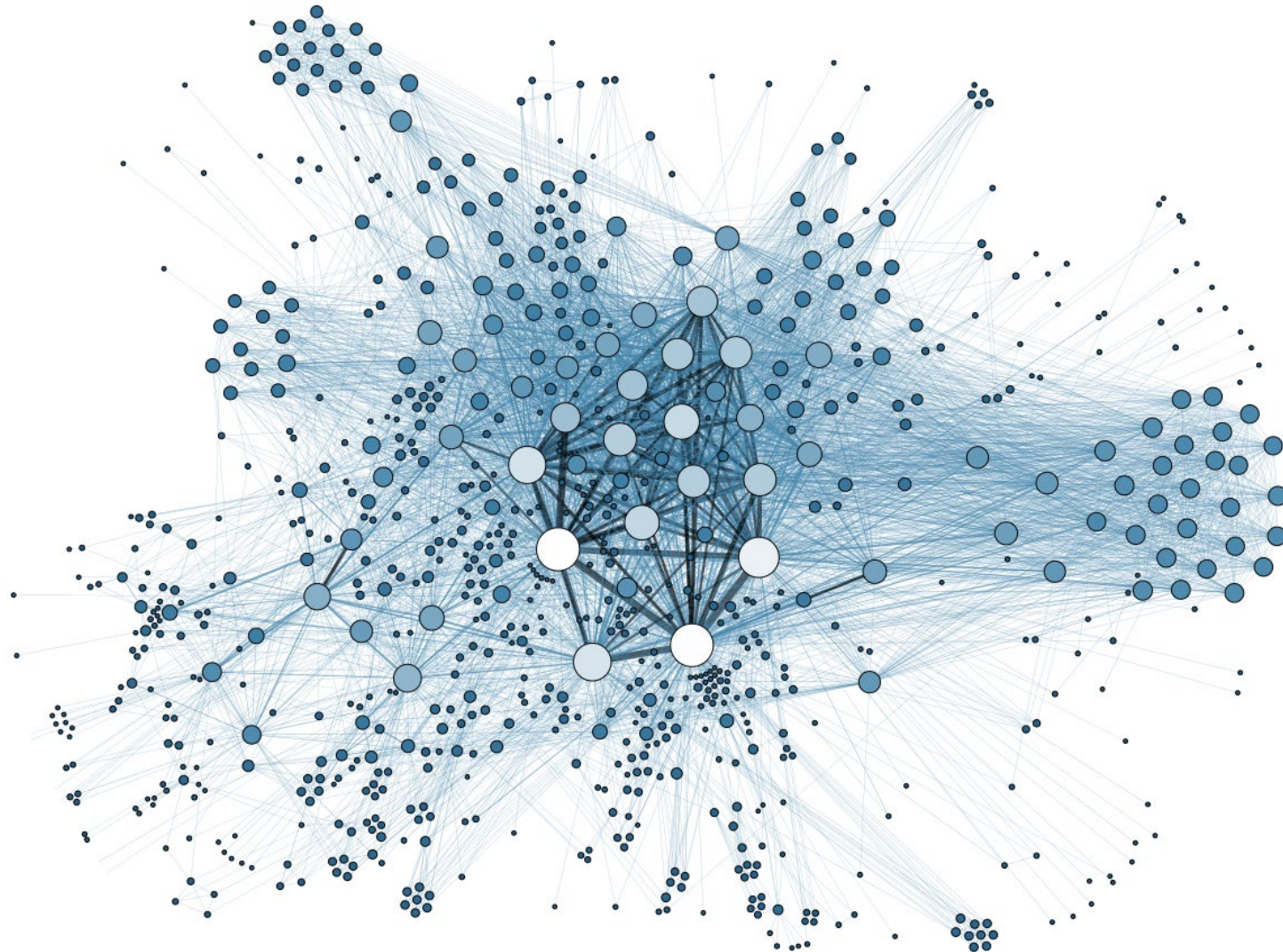
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Data

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Export as PDF

OpenAlex = A large knowledge graph for open access research



OpenAlex methods research questions

1. Does OpenAlex contain the study reports we need to identify for systematic reviews, maps and other evidence syntheses? (*Recall*)
2. Can we use OpenAlex to efficiently identify the study reports we need for systematic reviews, maps and other evidence syntheses?
(*Precision*)

OpenAlex methods research questions

1. Does OpenAlex contain the study reports we need to identify for systematic reviews, maps and other evidence syntheses? (*Recall*)
2. Can we use *machine learning tools to exploit the network graph and text features of* OpenAlex *records* to efficiently identify the study reports we need for systematic reviews, maps and other evidence syntheses? (*Precision*)

OpenAlex auto-update model for continual updating of larger Cochrane Reviews

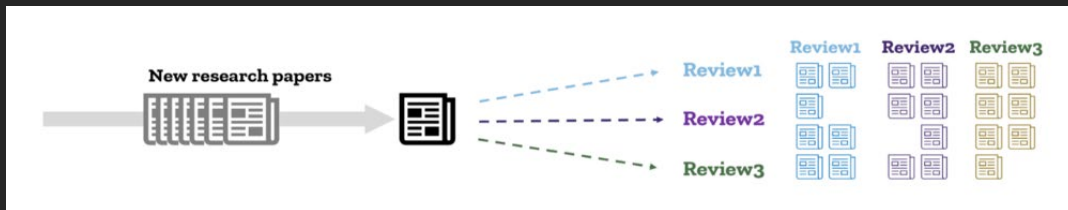
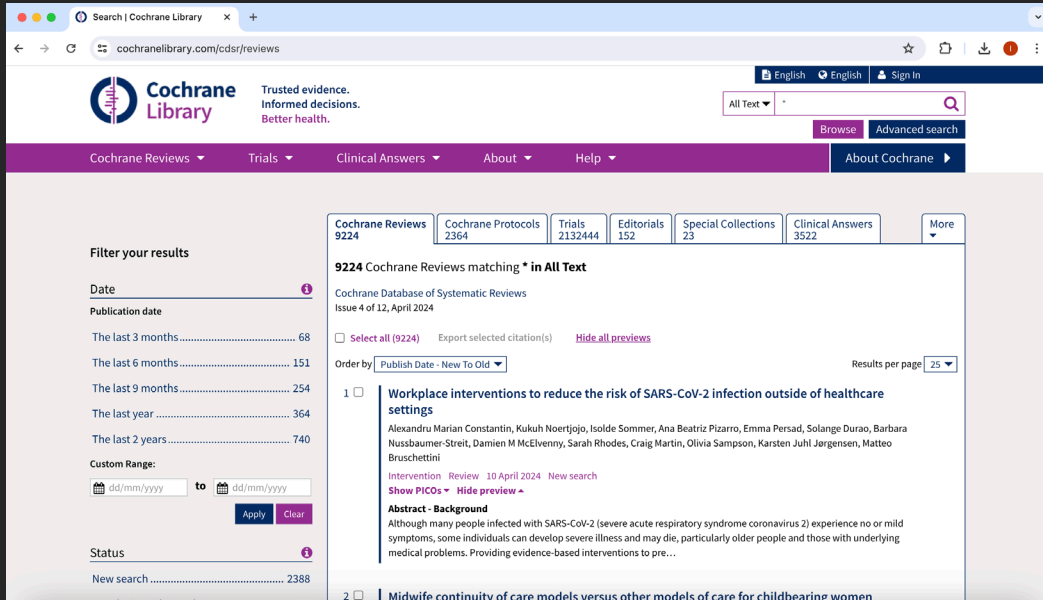


Table 1: Dataset statistics

Num. unique reviews	644
Num. review domains	52
Num. unique publications	14574
Min publications per review	40

Table 2: **Experimental results.** Rows correspond to model runs with a certain set of features. Columns represent the best result for a certain threshold, in terms of the best precision with 0.97 recall. Training time is measured over a cloud virtual machine with a single GPU.

#	Features	Precision @97	Recall	Training time
<i>Baseline</i>				
1	Auth-Cit-Tit	.593	.996	na
2	Auth-Cit-Tit-Abs	.352	.999	na
3	Auth-Cit-Tit-Abs-FoS-UMLS	.909	.988	2h29'
<i>With embeddings</i>				
4	Auth-Cit-Tit-eTit	.947	.983	5h43'
5	Auth-Cit-Tit-eTit-Abs-eAbs	.96	.979	9h59'
6	Auth-Cit-Tit-eTit-Abs-eAbs-FoS-UMLS	.888	.989	na

Automated OpenAlex searches with other ML tools for continual updating of a living map of COVID-19 research

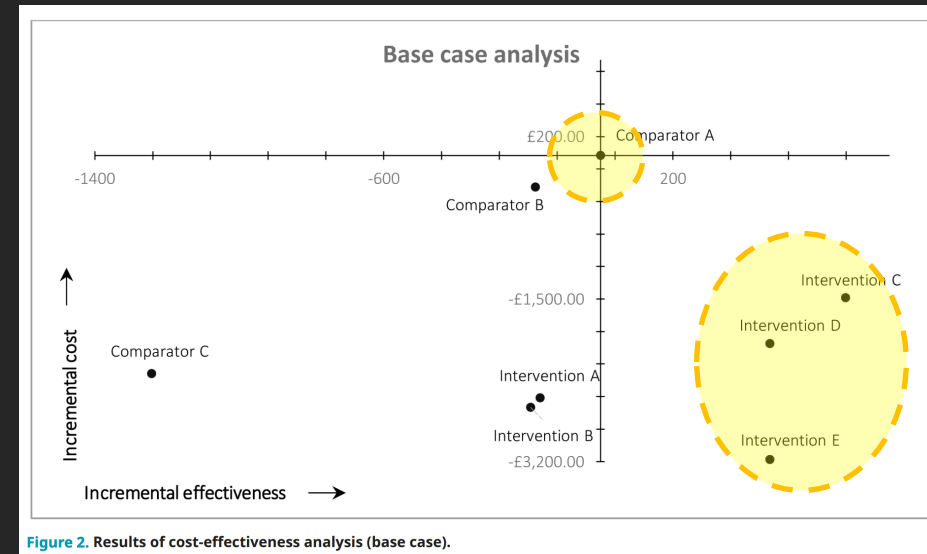
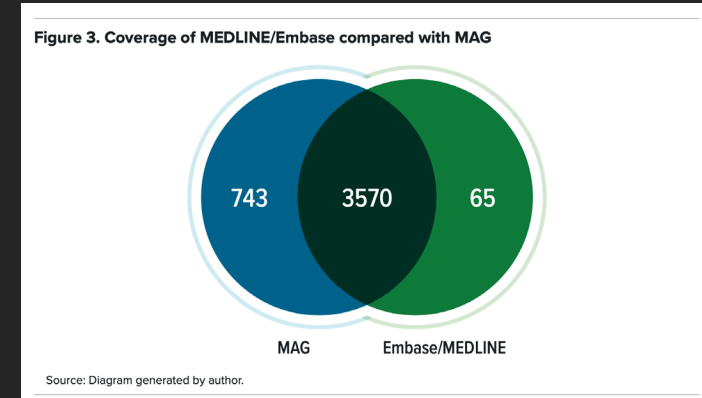
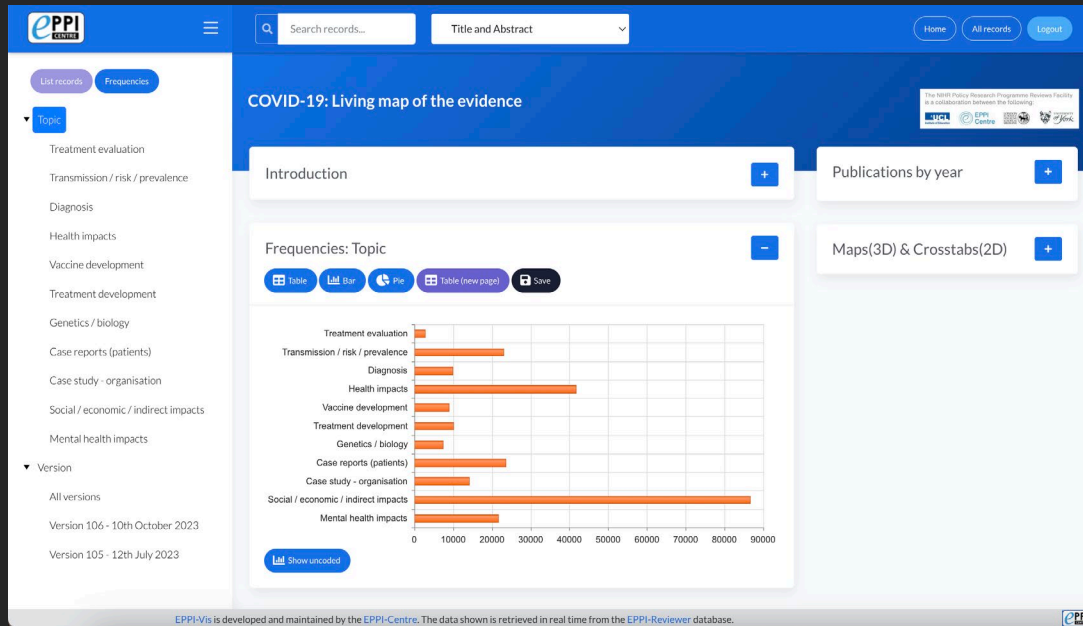
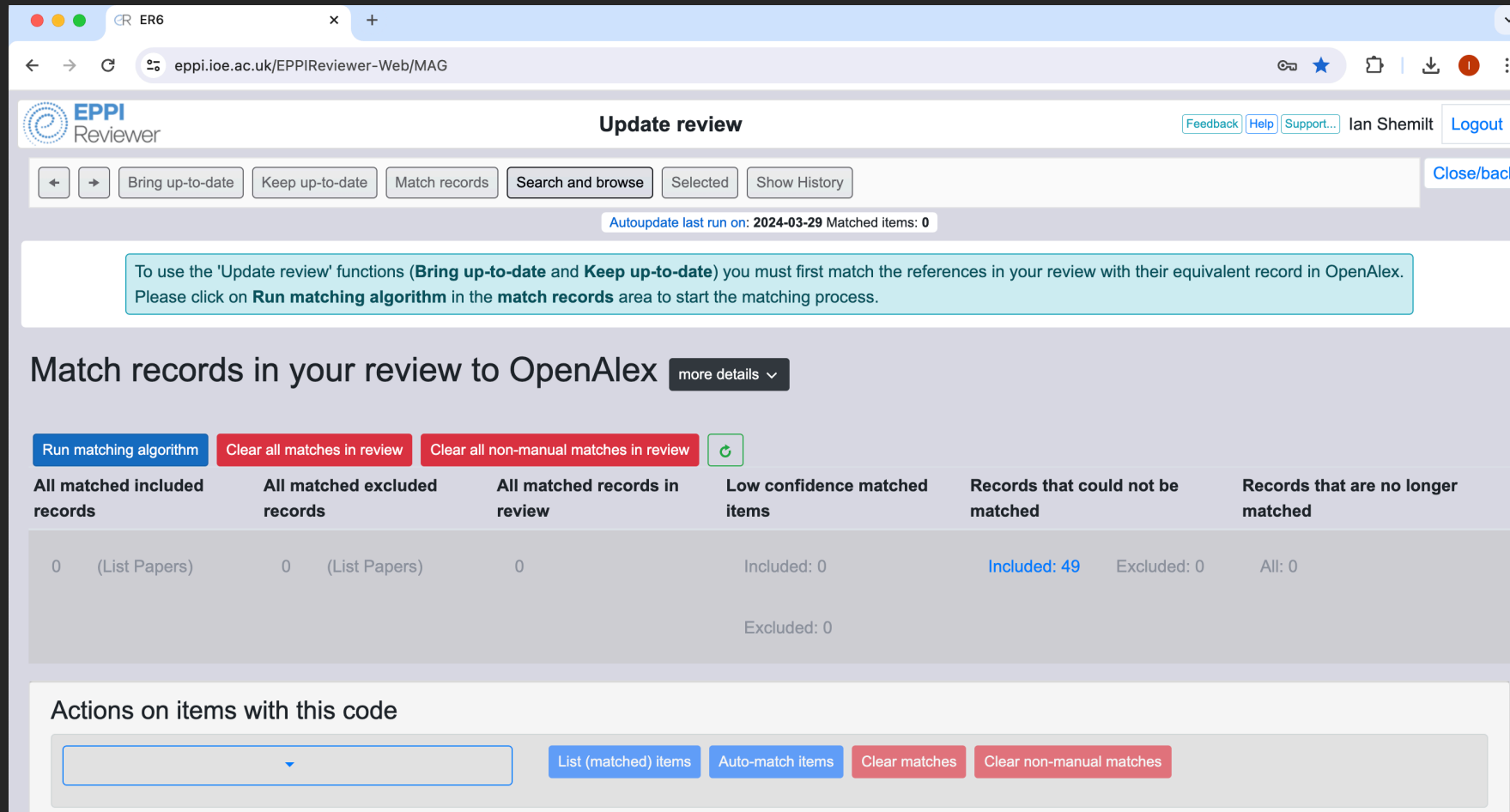


Figure 2. Results of cost-effectiveness analysis (base case).

Further rigorous evaluations needed spanning a wide range of (L)SRs and (living) maps!



OpenAlex tools in EPPI Reviewer



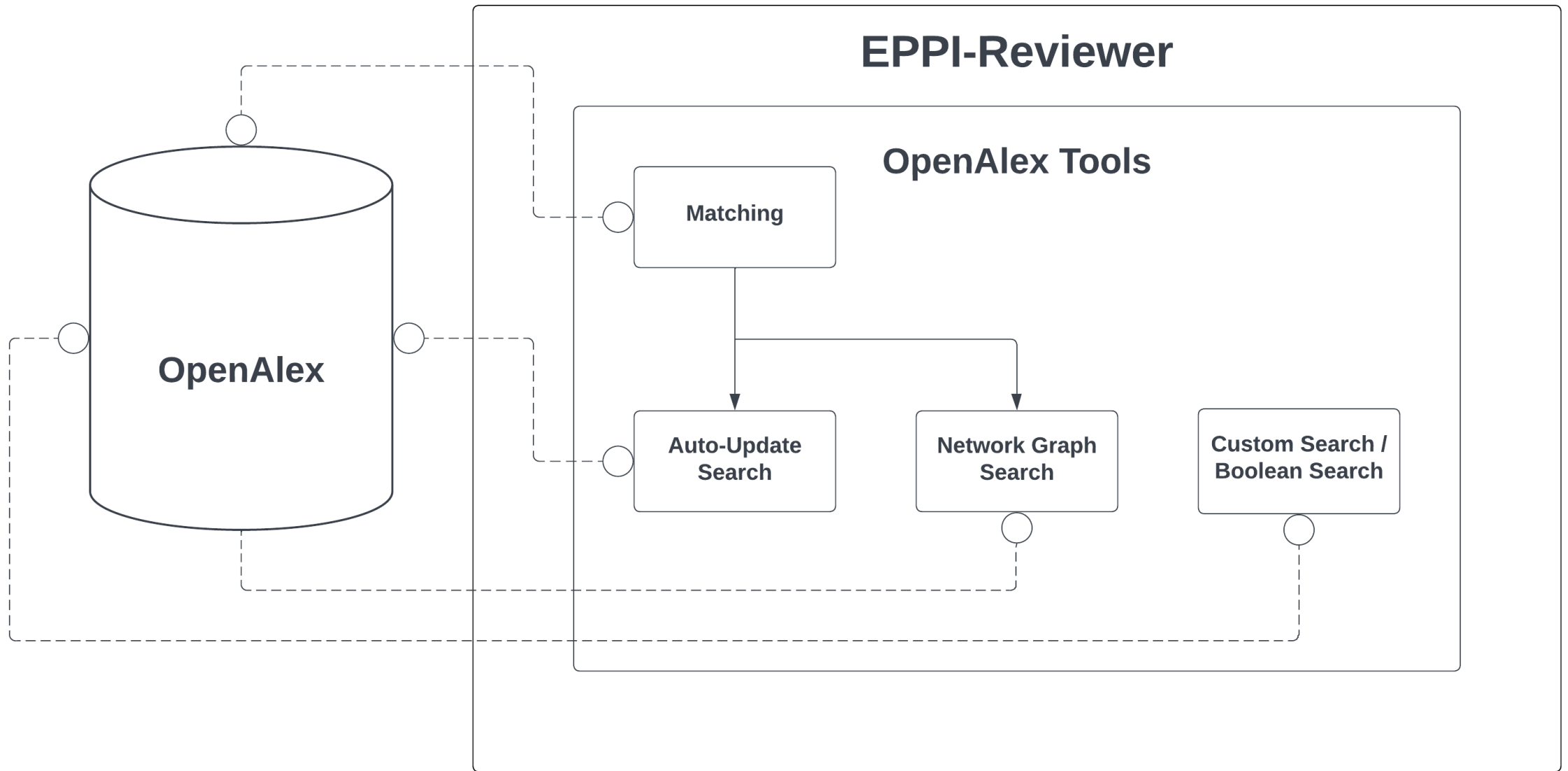
The screenshot shows the 'Update review' interface in EPPI Reviewer. At the top, there are navigation buttons: 'Bring up-to-date', 'Keep up-to-date', 'Match records', 'Search and browse', 'Selected', and 'Show History'. A status bar indicates 'Autoupdate last run on: 2024-03-29 Matched items: 0'. A teal box contains instructions: 'To use the 'Update review' functions (Bring up-to-date and Keep up-to-date) you must first match the references in your review with their equivalent record in OpenAlex. Please click on Run matching algorithm in the match records area to start the matching process.'

The main section is titled 'Match records in your review to OpenAlex' with a 'more details' dropdown. Below this are several action buttons: 'Run matching algorithm' (blue), 'Clear all matches in review' (red), 'Clear all non-manual matches in review' (red), and a refresh icon (green).

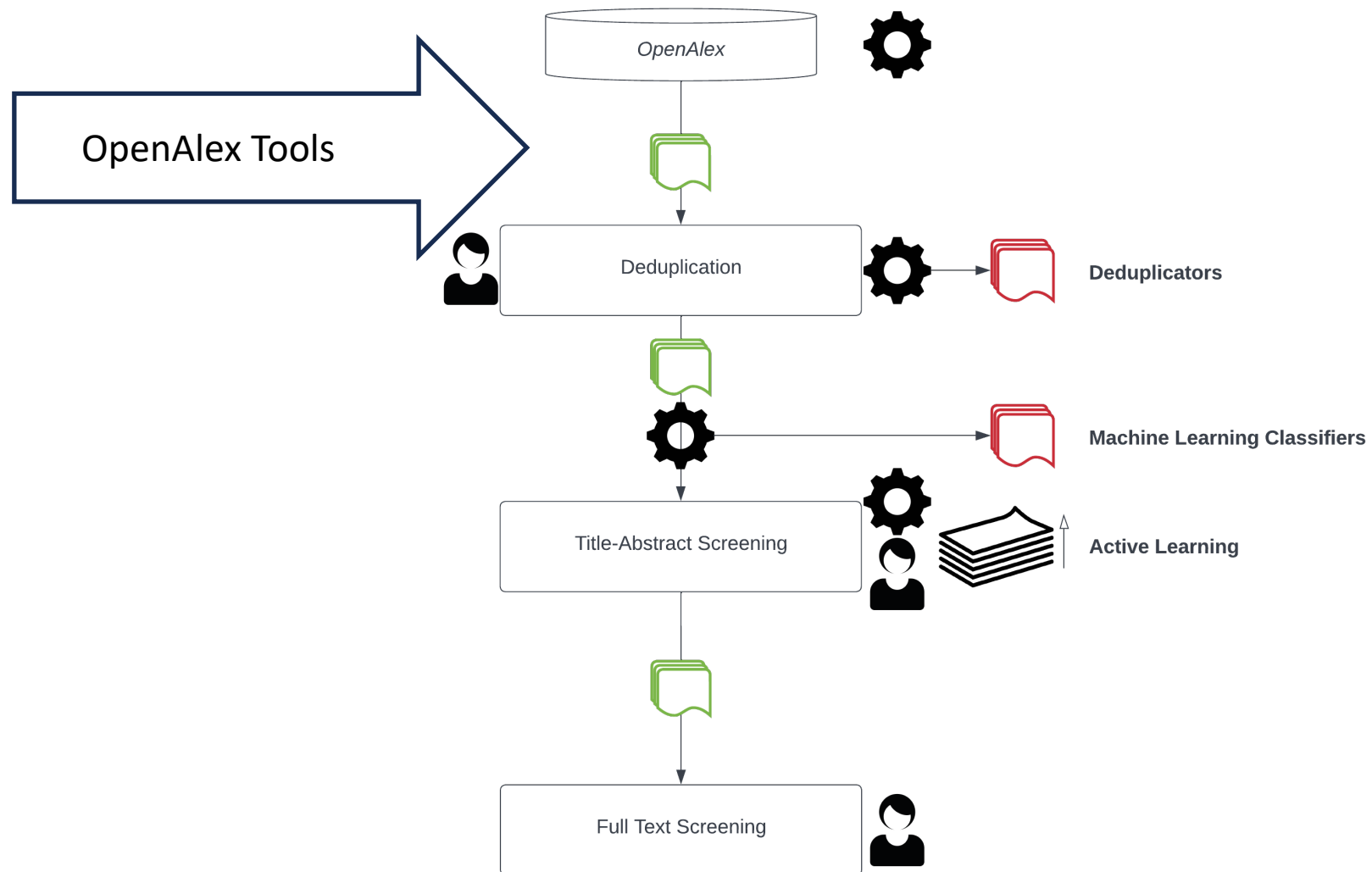
All matched included records	All matched excluded records	All matched records in review	Low confidence matched items	Records that could not be matched	Records that are no longer matched
0 (List Papers)	0 (List Papers)	0	Included: 0 Excluded: 0	Included: 49 Excluded: 0	All: 0

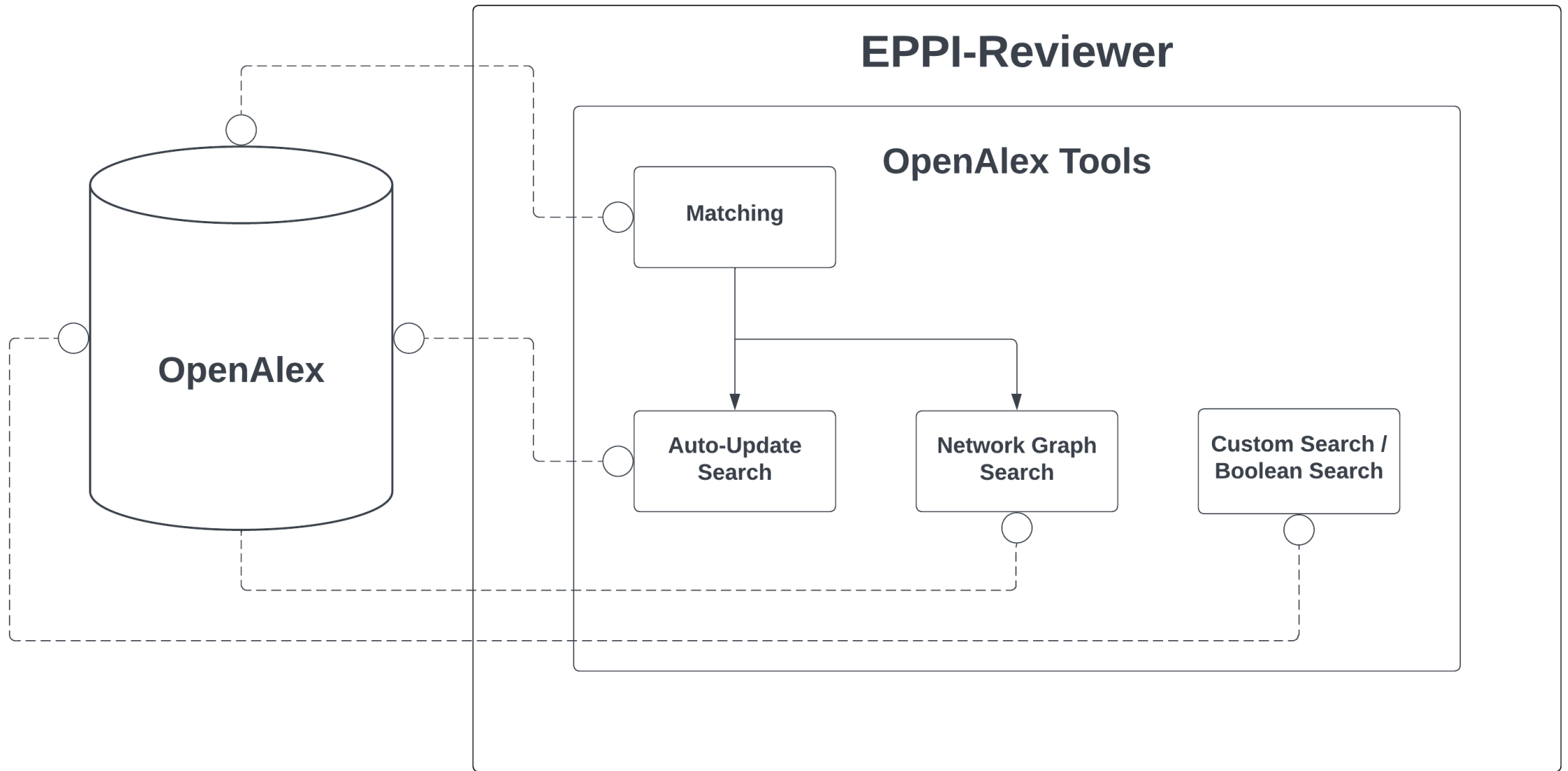
At the bottom, there is a section 'Actions on items with this code' with a dropdown menu and four buttons: 'List (matched) items' (blue), 'Auto-match items' (blue), 'Clear matches' (red), and 'Clear non-manual matches' (red).

See eppi.ioe.ac.uk/cms/Default.aspx?tabid=3754 for further details



OpenAlex and ML tools for automated study identification



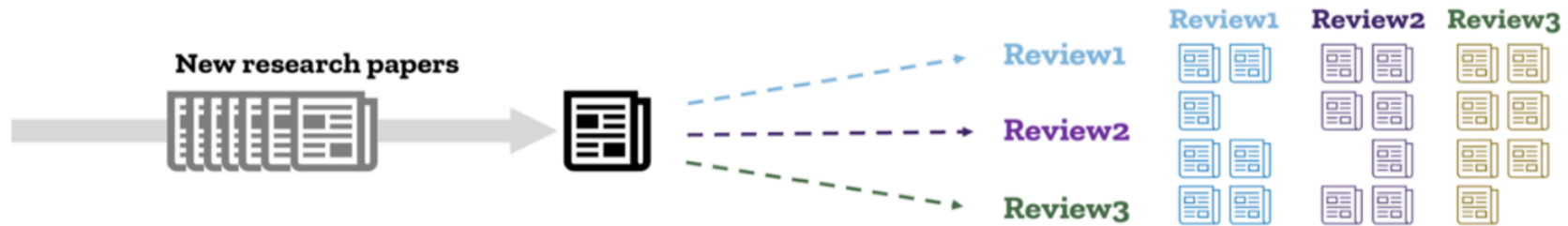


Auto-update

Problem Formulation

The domain entities are **papers** and **reviews**. Specifically, a review comprises a curated collection of papers that are relevant to a certain scientific question. The task is about recommending brand new papers to reviews owners based on their relevance to the scientific questions. More formally, the problem to address is the following:

Given a set of reviews R , a set of papers P_r for each review $r \in R$ and a set of new papers P_{new} the task is about finding a set of pairs (p, r) such that $p \in P_{new}$, $r \in R$ and p is relevant to r based on P_r .



Review1: "Empirical studies in Pair Programming for CS/SE Teaching in Higher Education"

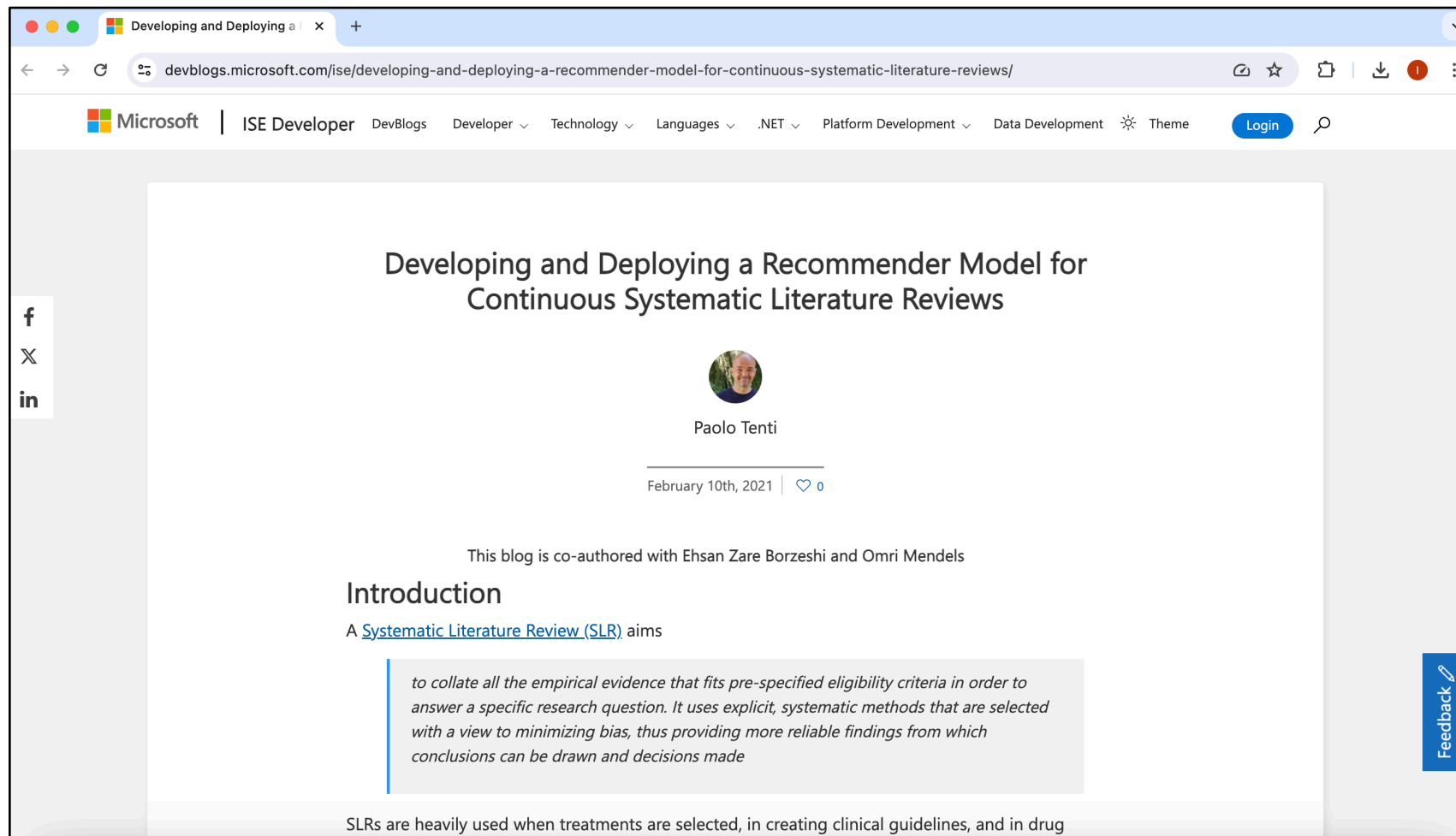
Review2: "Interventions for recruiting smokers into cessation programmes"

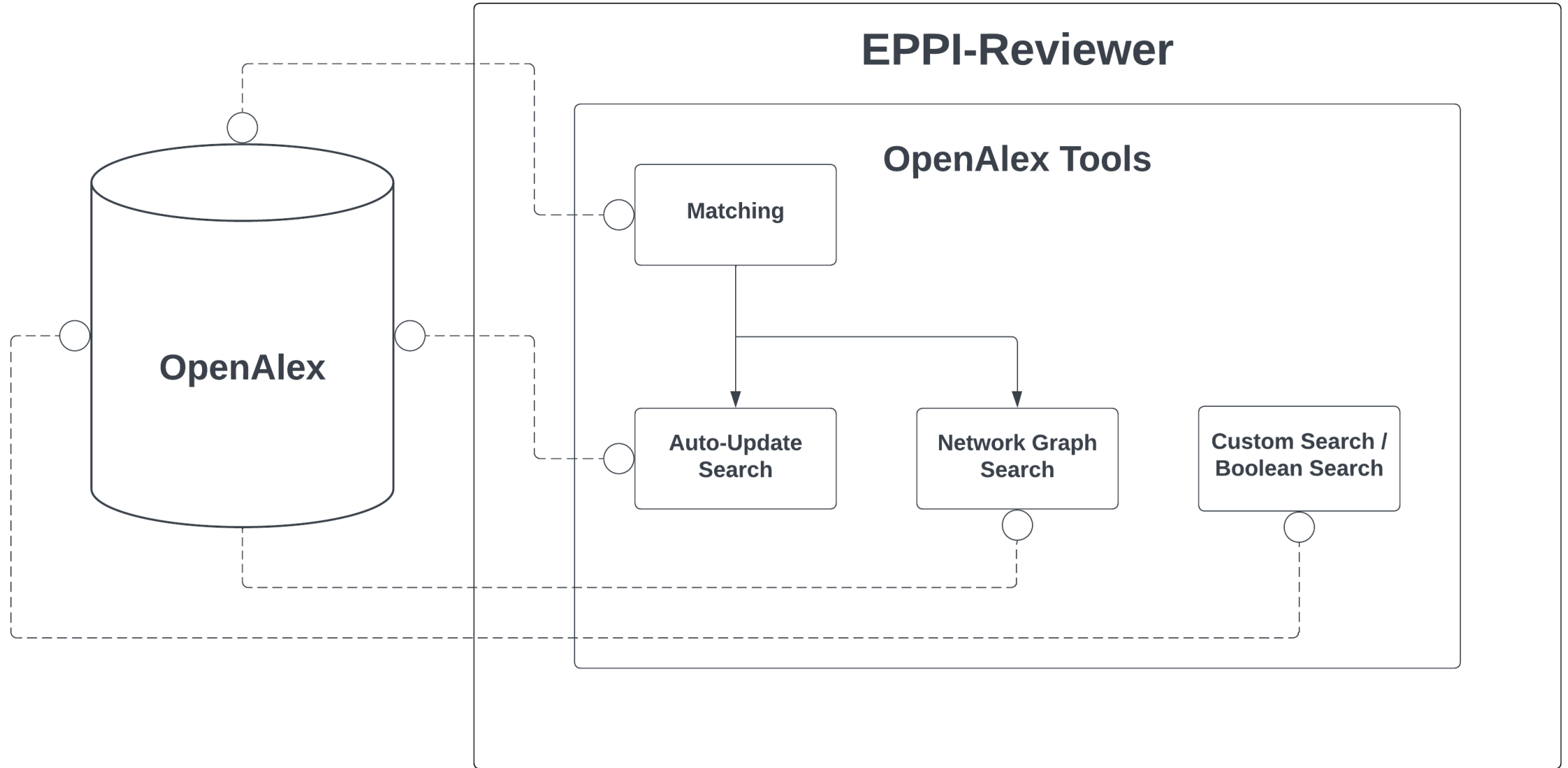
Review3: "Immunotherapy (oral and sublingual) for food allergy to fruits"

Auto-update – ML model technical details

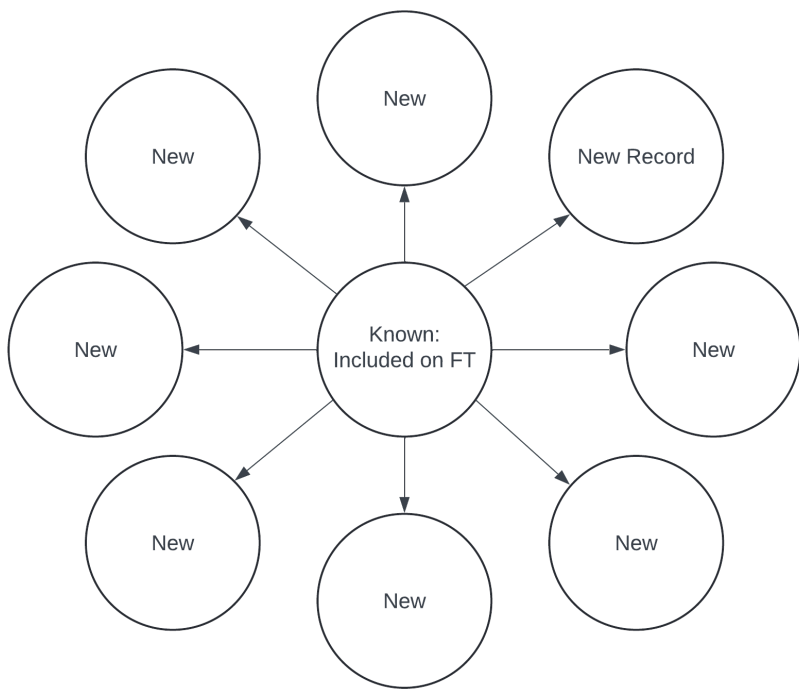
The screenshot shows a web browser displaying an SSRN article. The browser's address bar shows the URL <https://dx.doi.org/10.2139/ssrn.4406117>. The SSRN navigation bar includes links for 'Product & Services', 'Subscribe', 'Submit a paper', 'Browse', 'Rankings', 'Blog', and 'Contact', along with search and shopping cart icons, and buttons for 'Create account' and 'Sign in'. A notice below the navigation bar states: 'This is a preprint article, it offers immediate access but has not been peer reviewed.' The article title is 'A Content-Based Recommendation Model for Living Evidence', with 23 pages and a posting date of 4 Apr 2023. The authors listed are Paolo Tenti (Università degli Studi di Milano-Bicocca), Gabriella Pasi (Università degli Studi di Milano-Bicocca), James Thomas (University College London), and Rafael Peñaloza (Università degli Studi di Milano-Bicocca). The abstract begins with 'Systematic reviews summarise the knowledge available in the literature on a specific topic. Keeping systematic reviews up to date with new publications as soon as they become available---in living systematic reviews'. On the right side, there is a 'Submit Negative Results' button and a 'Paper statistics' section showing 49 downloads and 141 abstract views. A PlumX Metrics logo is also visible at the bottom right of the article content area.

Auto-update – ML model technical details

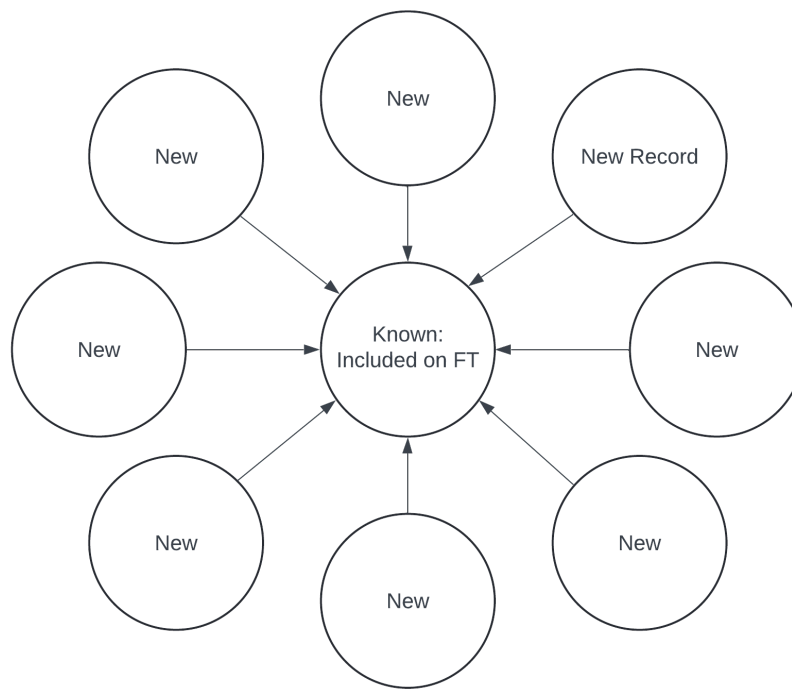




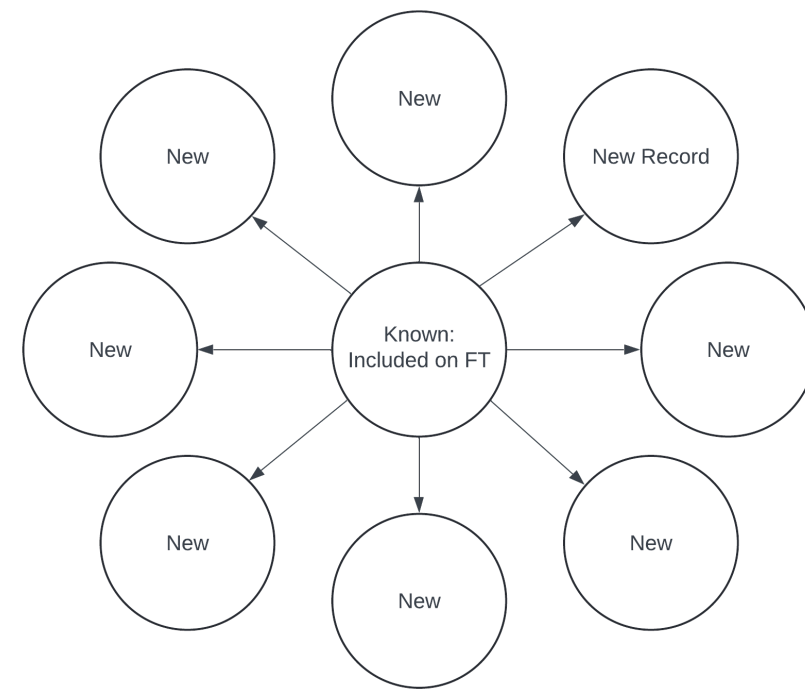
Network graph search – three modes



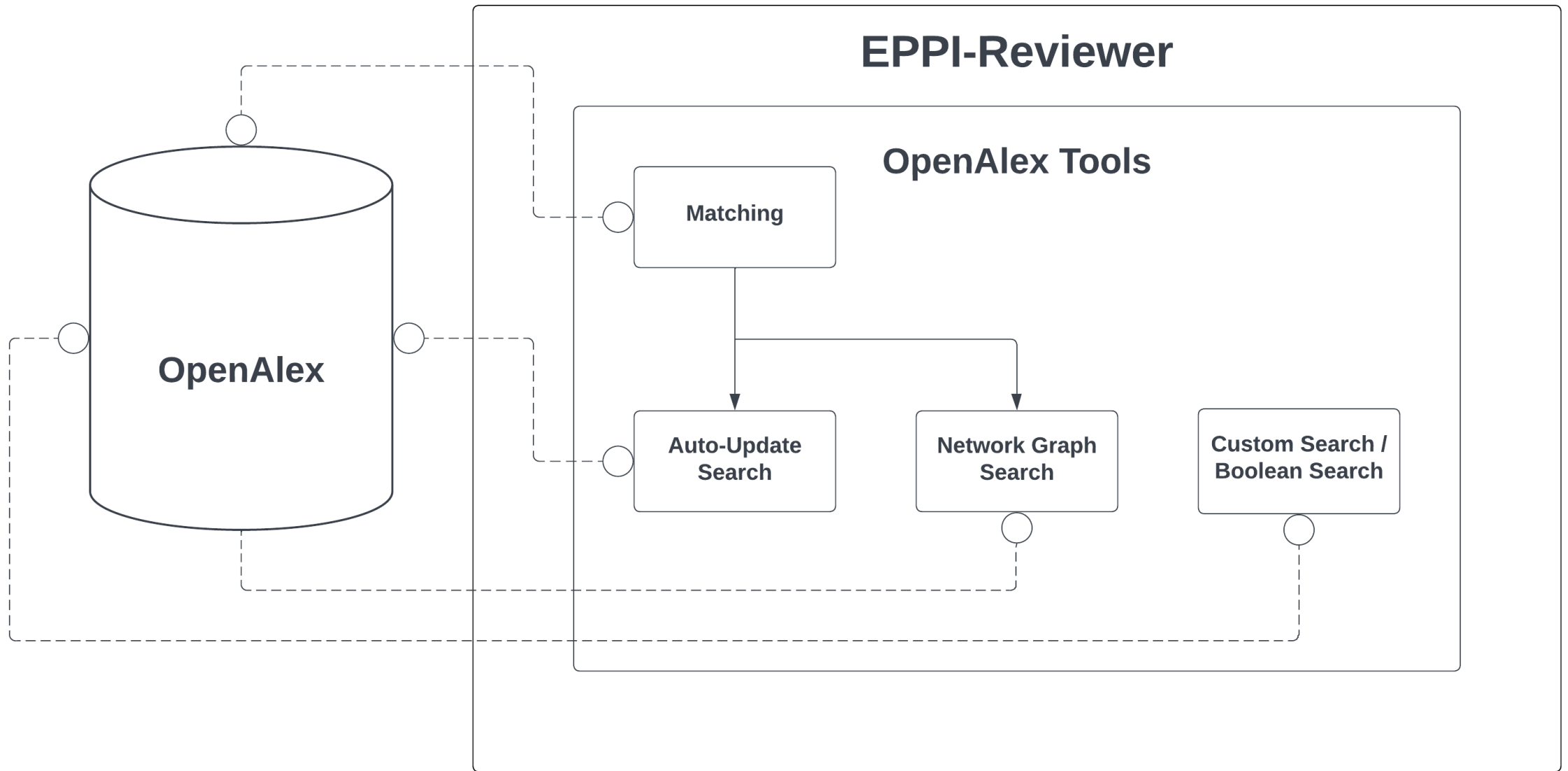
Bibliography
 'New' in the bibliography of 'Known'

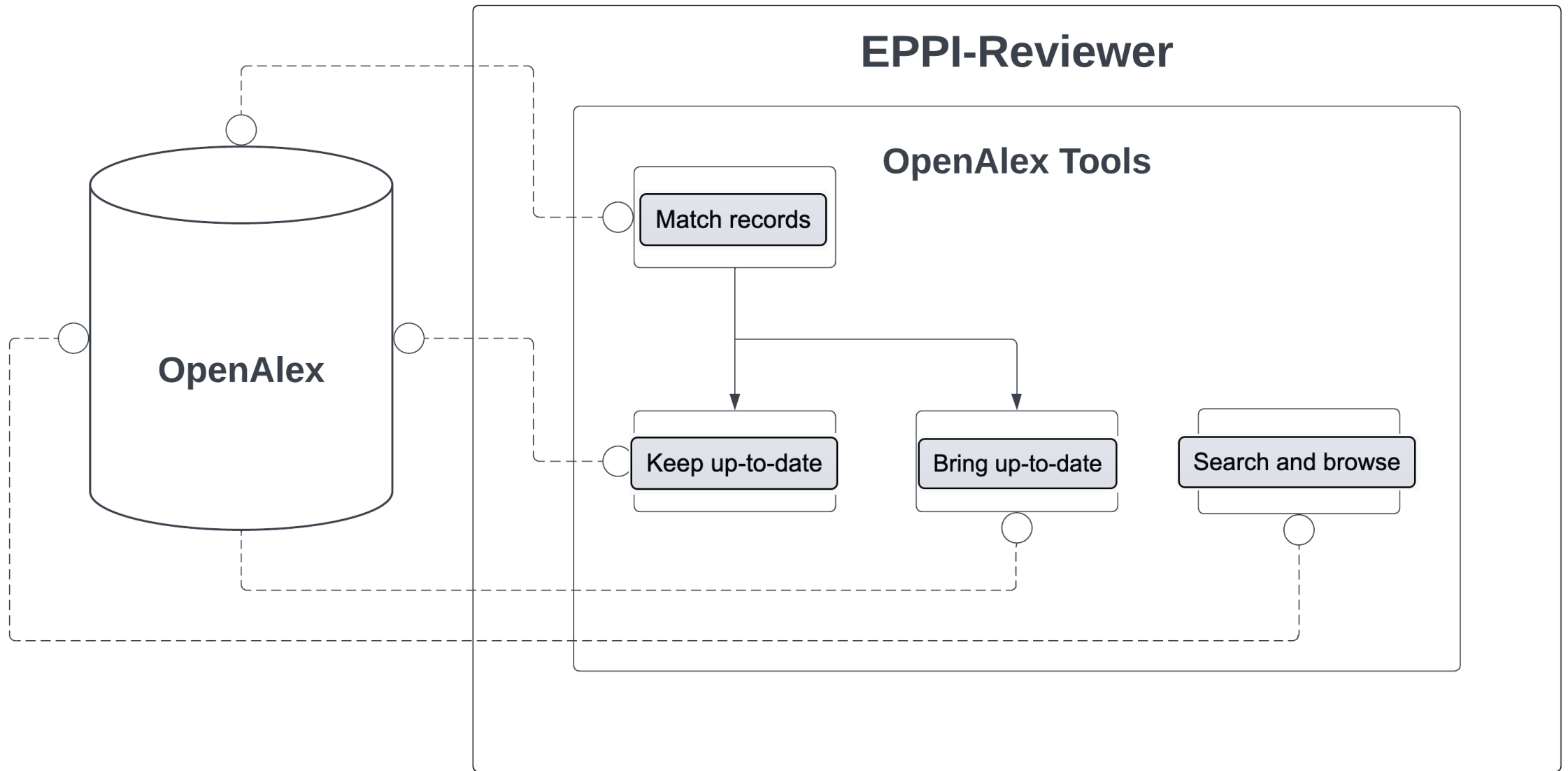


Cited by
 'Known' cited by 'New'



Recommended by
 'New' recommended by 'Known'







**Testgüte verschiedener Verfahren zur
Diagnose der Gicht**

Evidenzbericht zur S3-Leitlinie Diagnostik und Therapie
der Gicht

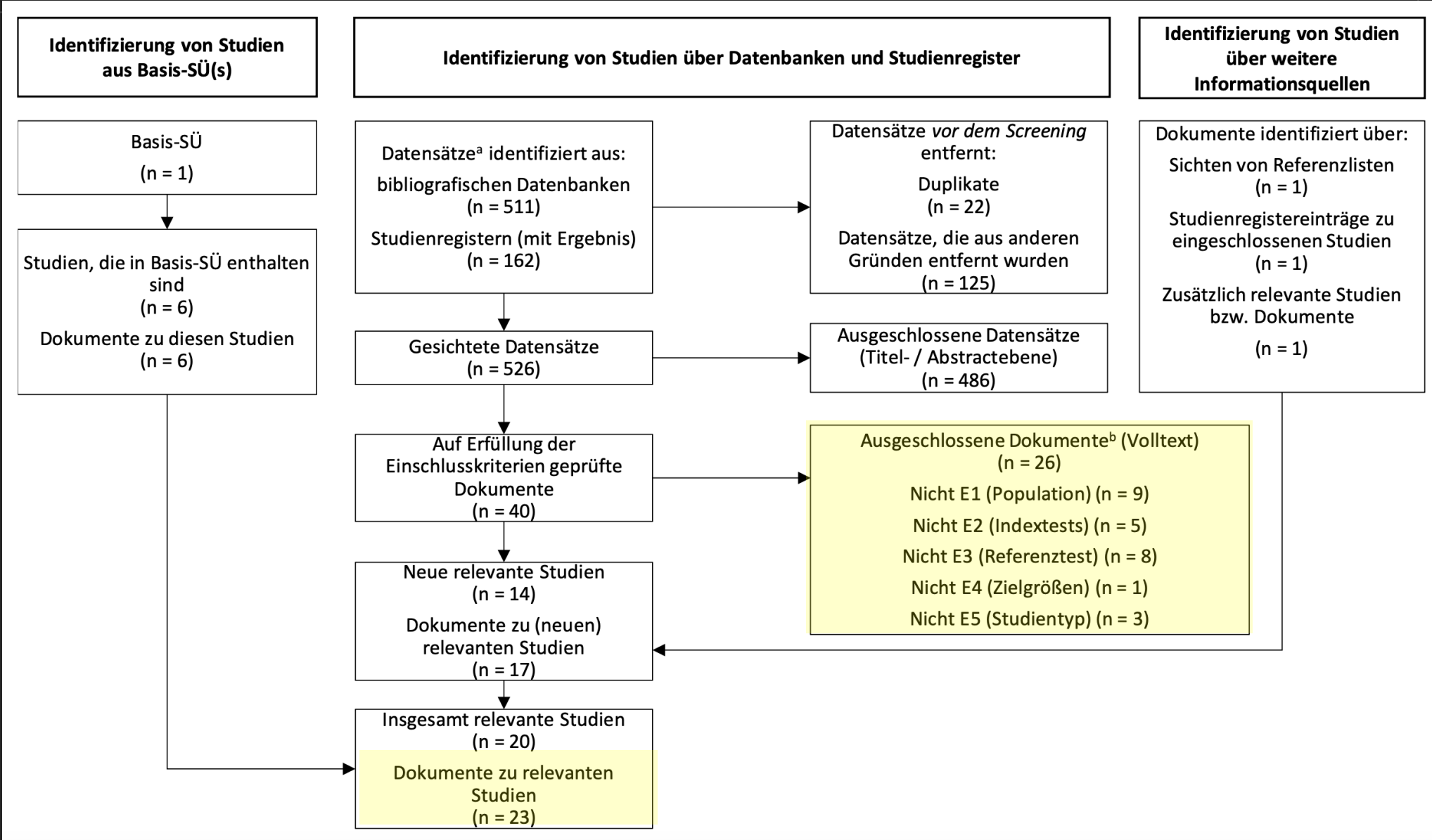


Projekt: V22-06A Version: 1.0 Stand: 28.09.2023 IQWiG-Berichte – Nr. 1646
DOI: 10.60584/V22-06A

- Recent IQWiG evidence search for the S3 guideline on diagnosis and treatment of gout (v1.0)
- Search is for diagnosis (not treatment): reports of studies of accuracy of various procedures for diagnosing gout among adult patients with suspected gouty arthritis
- Conventional searches for primary studies:
 - Ovid MEDLINE(R) ALL 1946 to April 21, 2023
 - CENTRAL (The Cochrane Library): Issue 4, April 2023
 - 2 x CTRs
- Hypothetical use scenario = Update this evidence search using OpenAlex tools only: April 2023 to present day

Tabelle 1: Übersicht über die Kriterien für den Studieneinschluss

Einschlusskriterien	
E1	Population: erwachsene Patientinnen und Patienten mit Verdacht auf eine Gichtarthritis
E2	Indextests: <ul style="list-style-type: none"> ▪ klinischer Diagnosescore (Gicht-Kalkulator), Cut-off: 8 [8] ▪ DECT ▪ Röntgen ▪ Ultraschall <ul style="list-style-type: none"> ▫ Doppelkontur-Zeichen und / oder Tophus^a gemäß der OMERACT-Definition [9] – jegliche Auffälligkeit ▫ Doppelkontur-Zeichen und / oder Weichteil-Ansammlungen von Natriumuratkristallen und / oder Tophi^a – jegliche Auffälligkeit ▫ Doppelkontur-Zeichen und / oder Schneesturm-Erscheinungsbild und / oder Tophus^a – jegliche Auffälligkeit ▪ ACR- / EULAR-Klassifikationskriterien, Cut-off: 8 [10] Es werden ausschließlich Indextests herangezogen, die den Referenztest nicht beinhalten.
E3	Referenztest: mikroskopischer Nachweis von Natriumuratkristallen in der Gelenkflüssigkeit oder im periartikulären Gewebe
E4	Zielgrößen: personenbezogene Vierfeldertafel-Daten zur Berechnung der diagnostischen Güte (z. B. Sensitivität, Spezifität)
E5	Studientyp: prospektiv geplante Querschnitts- und Kohortenstudien ^b
E6	Publikationssprache: Deutsch oder Englisch
E7	Vollpublikation verfügbar ^c



Contact information



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- Profile: profiles.ucl.ac.uk/56390-ian-shemilt
- EPPI Centre: eppi.ioe.ac.uk/cms
- EPPI Reviewer: eppi.ioe.ac.uk/cms/er



EPPI Centre
Evidence for
Policy & Practice



UCL

IQWiG Information Retrieval Meeting (IRM 2024): Software and data skills for information specialists

Introduction to OpenAlex tools for efficient automated updating of systematic reviews and maps

Ian Shemilt

EPPI Centre, University College London, United Kingdom

GPT-4 auto-coding in EPPI Reviewer for eligibility screening

Auto-Coding 1 - Eligibility Screening - Criteria Set A

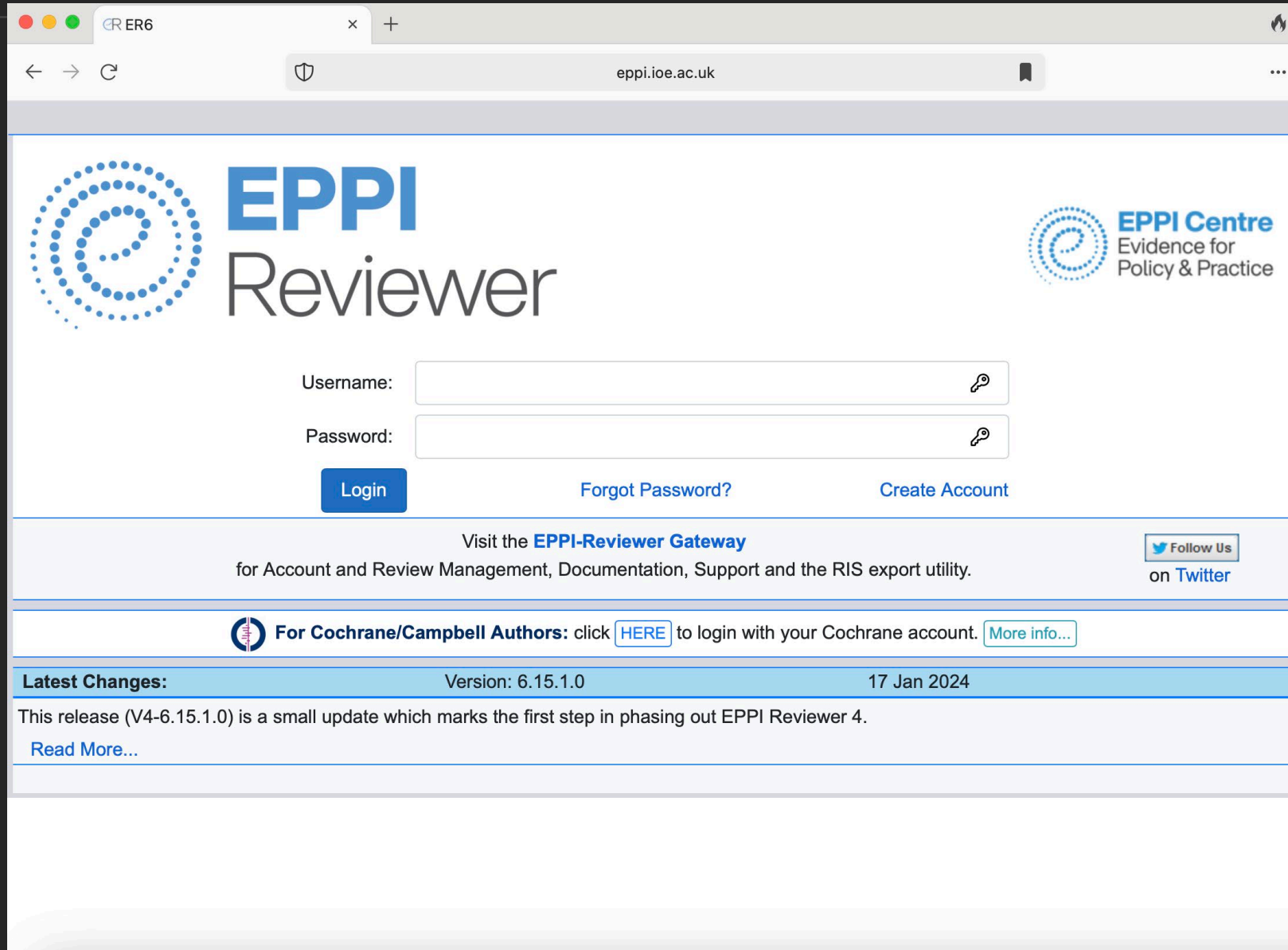
- Inclusion Criterion A1
- Inclusion Criterion A2
- Inclusion Criterion A3
- Inclusion Criterion A4
- Inclusion Criterion A5
- Inclusion Criterion A6
- Inclusion Criterion A7
- Inclusion Criterion A8
- Inclusion Criterion A9
- Inclusion Criterion A10
- Inclusion Criterion A11

Code description:
 eligibility_decision_is_included_criterion_a1: boolean // Is this a report of a primary research study?

- eligibility_decision_is_included_criterion_a1: boolean // Is this a report of a primary research study?
- eligibility_decision_is_included_criterion_a2: boolean // Is this a report of a systematic review?
- eligibility_decision_is_included_criterion_a3: boolean // Is this a report of a living systematic review?
- eligibility_decision_is_included_criterion_a4: boolean // Is this a report of a meta-analysis?

• ~82-85% agreement vs. human decisions (n=100)



- Recall ~0.95-0.98
- Precision ~0.86-0.87



The screenshot shows a web browser window with the address bar displaying `eppi.ioe.ac.uk`. The page features the EPPI Reviewer logo on the left and the EPPI Centre logo on the right. The main content area contains a login form with fields for Username and Password, each with a password visibility icon. Below the form are three links: Login, Forgot Password?, and Create Account. A banner below the form promotes the EPPI-Reviewer Gateway and includes a Follow Us button on Twitter. A section for Cochrane/Campbell Authors provides a link to login with a Cochrane account. A blue banner at the bottom of the page displays the latest changes: Version: 6.15.1.0, dated 17 Jan 2024, with a link to read more.

CR ER6

eppi.ioe.ac.uk




Username:

Password:

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Visit the [EPPI-Reviewer Gateway](#)
for Account and Review Management, Documentation, Support and the RIS export utility.

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 **For Cochrane/Campbell Authors:** click [HERE](#) to login with your Cochrane account. [More info...](#)

Latest Changes: Version: 6.15.1.0 17 Jan 2024

This release (V4-6.15.1.0) is a small update which marks the first step in phasing out EPPI Reviewer 4.
[Read More...](#)





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Corporate Solutions

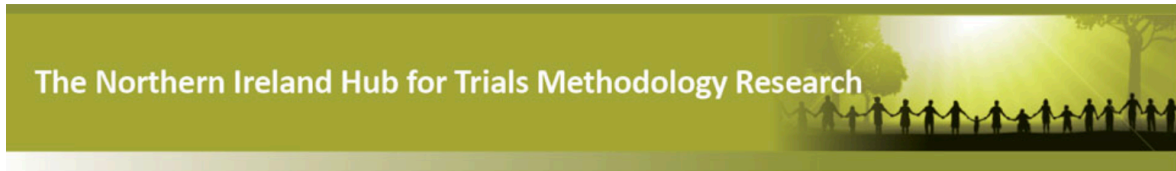
EXTRA 300 SC

Paul Antonsson

Swiss Re
Corporate Solutions

VH-IXC

GREG DESIATOV



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REPOSITORIES

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SWAR ID	Title	Link (Author(s) & Date)
1)	Citation screening in systematic reviews: Two approaches, two authors and time taken	SWAR01 Declan Devane (2022 Aug 25 1552)
2)	Effects of reading a written summary or listening to a summary podcast on knowledge and understanding of the findings of a systematic review.	SWAR02 Mike Clarke (2013 JUL 19 1210)
3)	To investigate whether supplying Cochrane Eyes and Vision review author teams	SWAR 03 Jennifer Evans and

New SWAR Registration – Forthcoming (Draft)

1. To assess the effectiveness and efficiency of conducting automated searches of the OpenAlex dataset – using OpenAlex tools in EPPI-Reviewer – compared with conventional electronic searches of multiple literature databases, for continual or regular updating of (living) systematic reviews.
2. To assess the effectiveness and efficiency of using bespoke, binary machine learning classifiers – trained, calibrated, evaluated and deployed using machine learning tools in EPPI-Reviewer – to automatically exclude some records prior to the citation (title-abstract) screening stage, compared with screening all citations, for continual or regular updating of (living) systematic reviews.