



# Introducing Screen4Me

**CIS Support Team Webinar**

06 February 2019

Trusted evidence.  
Informed decisions.  
Better health.





# Welcome

## Aims:

- Introduce you to Screen4Me
- Demo Screen4Me
- Q&A





## Screen4Me: what is it?

A results screening workflow that uses...



## Screen4Me: what is it?

A results screening workflow that uses...

Known  
assessments

RCT  
classifier

Cochrane  
Crowd



# Screen4Me: what is it?

## Known assessments

The records that have already been through Cochrane Crowd

Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]

Objective: To assess the relationship between vitamin D [25(OH) D] and irreversible brain tissue damage characterized by the occurrence of persistent T1- hypointensities (permanent black holes-PBHs) in patients with clinically isolated syndrome (CIS) who were followed for 5 years. **Methods:** BENEFIT was a **randomized trial** comparing early versus delayed interferon beta-1b (IFNB-1b) treatment in patients with a first event suggestive of MS (CIS). Serum 25(OH)D concentrations were measured at baseline, 6, 12, and 24 months. 433 of the 468 patients had at least one 25(OH)D measurement and had lesion follow-up for at least 1 year. We calculated a seasonadjusted 25(OH)D and estimated the association between the time-dependent cumulative average of 25(OH)D and the number of new PBHs after 6 months. We modeled lesion counts using negative binomial models and logistic regression models to assess the proportion of lesions evolving into PBHs accounting for intrapatient correlation using generalized estimating equations. We also assessed the association

To date, over 500,000 bibliographic records have been through Cochrane Crowd



# Screen4Me: what is it?

## Known assessments

The records that have already been through Cochrane Crowd

pat	Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]
Objec	Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]
dam	Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]
PBHs	Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]
Objec	Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]
dam	Objective: To assess the relationship between vitamin D [25(OH) D] and irreversible brain tissue damage characterized by the occurrence of persistent T1- hypointensities (permanent black holes- PBHs) in patients with clinically isolated syndrome (CIS) who were followed for 5 years. <b>Methods:</b> BENE
PBHs	BENE
meas	BENEFIT was a <b>randomized trial</b> comparing early versus delayed interferon beta-1b (IFNB-1b) treatment in patients with a first event suggestive of MS (CIS). Serum 25(OH)D concentrations were measured at baseline, 6, 12, and 24 months. 433 of the 468 patients had at least one 25(OH)D measurement and had lesion follow-up for at least 1 year. We calculated a seasonadjusted 25(OH)D and estimated the association between the time-dependent cumulative average of 25(OH)D and the number of new PBHs after 6 months. We modeled lesion counts using negative binomial models and logistic regression models to assess the proportion of lesions evolving into PBHs accounting for intrapatient correlation using generalized estimating equations. We also assessed the association
meas	
and	
meas	
num	
and	
meas	
logist	
intra	
num	
logist	
intra	

50,000+ RCTs



# Screen4Me: what is it?

## Known assessments

The records that have already been through Cochrane Crowd

Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]

Objective: To assess the relationship between vitamin D [25(OH) D] and irreversible brain tissue damage characterized by the occurrence of persistent T1- hypointensities (permanent black holes- PBHs) in patients with clinically isolated syndrome (CIS) who were followed for 5 years. **Methods:** BENEFIT was a **randomized trial** comparing early versus delayed interferon beta-1b (IFNB-1b) treatment in patients with a first event suggestive of MS (CIS). Serum 25(OH)D concentrations were measured at baseline, 6, 12, and 24 months. 433 of the 468 patients had at least one 25(OH)D measurement and had lesion follow-up for at least 1 year. We calculated a seasonadjusted 25(OH)D and estimated the association between the time-dependent cumulative average of 25(OH)D and the number of new PBHs after 6 months. We modeled lesion counts using negative binomial models and logistic regression models to assess the proportion of lesions evolving into PBHs accounting for intrapatient correlation using generalized estimating equations. We also assessed the association

50,000+ RCTs

Vitamin D and the development and evolution of permanent black holes among patients with clinically isolated syndrome. [72058510]

Objective: To assess the relationship between vitamin D [25(OH) D] and irreversible brain tissue damage characterized by the occurrence of persistent T1- hypointensities (permanent black holes- PBHs) in patients with clinically isolated syndrome (CIS) who were followed for 5 years. **Methods:** BENEFIT was a **randomized trial** comparing early versus delayed interferon beta-1b (IFNB-1b) treatment in patients with a first event suggestive of MS (CIS). Serum 25(OH)D concentrations were measured at baseline, 6, 12, and 24 months. 433 of the 468 patients had at least one 25(OH)D measurement and had lesion follow-up for at least 1 year. We calculated a seasonadjusted 25(OH)D and estimated the association between the time-dependent cumulative average of 25(OH)D and the number of new PBHs after 6 months. We modeled lesion counts using negative binomial models and logistic regression models to assess the proportion of lesions evolving into PBHs accounting for intrapatient correlation using generalized estimating equations. We also assessed the association

465,000 Rejects



## Screen4Me: what is it?

### Known assessments

Making better use of known assessments could really help to reduce some duplication of effort.

Over 90% of Cochrane reviews currently include only RCTs.

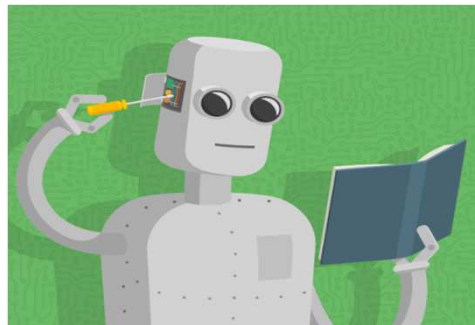




# Screen4Me: what is it?

## RCT classifier

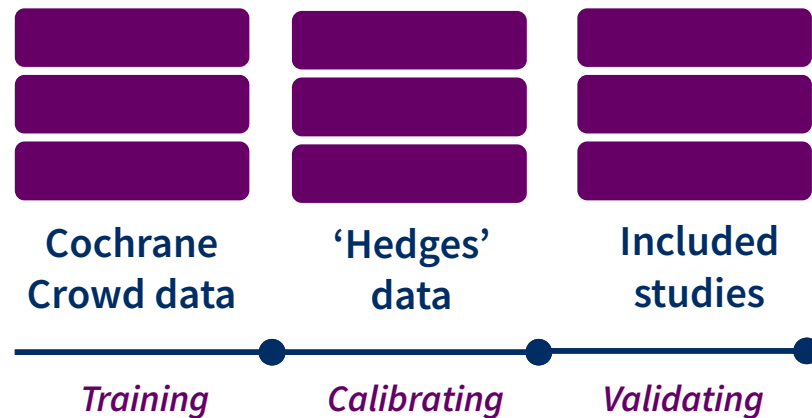
The classifier helps to distinguish RCTs from non-RCTs



The classifier was built using data (known assessments) generated by Cochrane Crowd.



# Screen4Me: what is it?



Three main datasets have been involved in building and testing the RCT classifier. The machine threshold will be set to achieve a 99% recall as requested by IRMG.



# Screen4Me: what is it?

## Cochrane Crowd

Online platform:  
[crowd.cochrane.org](https://crowd.cochrane.org)



6 'mainstream' tasks



10,000 sign-ups



150+ countries



# Screen4Me: what is it?

## Cochrane Crowd

The crowd model has proved very robust



Training



Algorithm



# Screen4Me: what is it?

## Cochrane Crowd

Screening for specific reviews pilots




Pilot work last summer on 4 Cochrane reviews.

Crowd took average of two days and was able to reduce the size of the batch by between 52%-83%



## Screen4Me: what is it?

Brining the **three components together** and enabling review teams to access them for their **specific reviews**



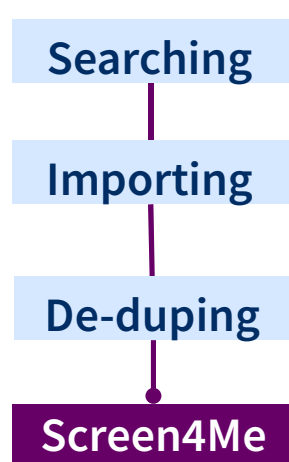
Known  
assessments

RCT  
classifier

Cochrane  
Crowd



## Screen4Me: how will it work?



These processes done just as they usually are

Screen4Me is operated from within the CRS 



# Screen4Me: workflow

Start: conduct usual review searches



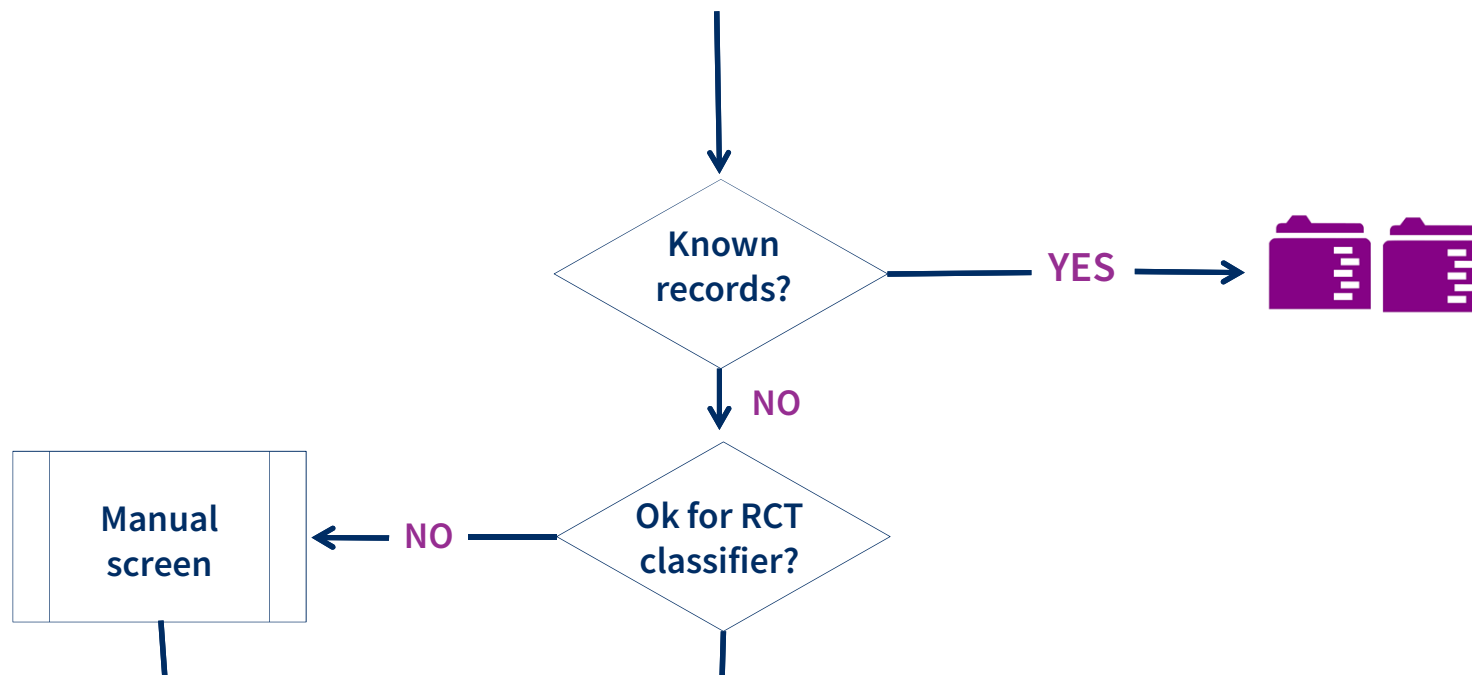
No → Leave workflow

Yes

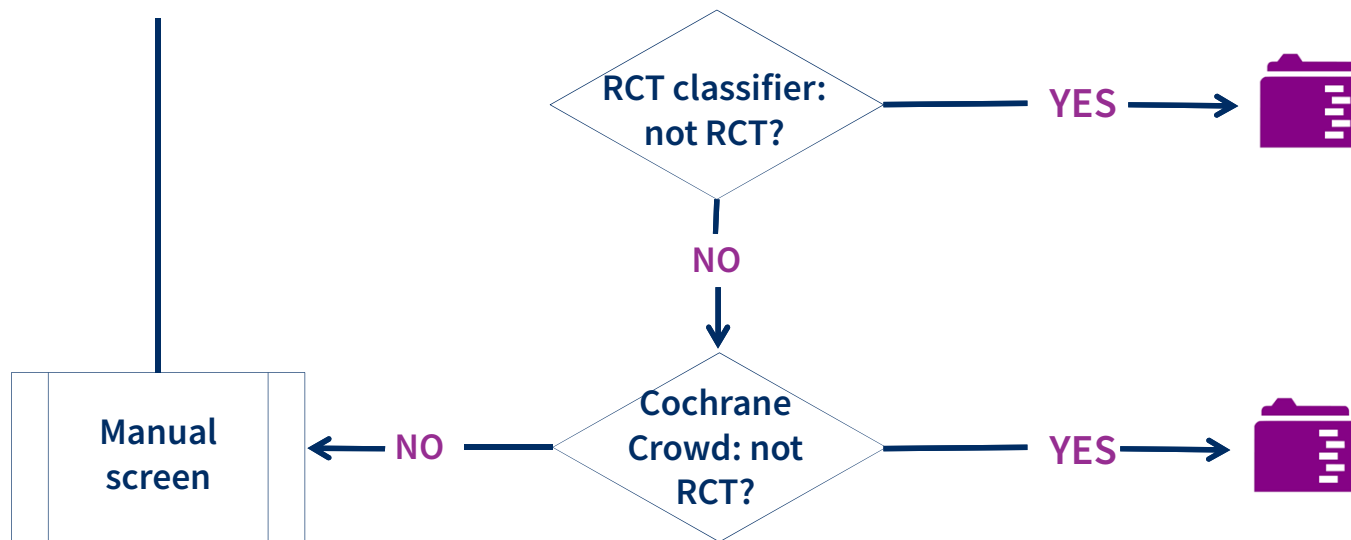




# Screen4Me: workflow *cont.*



# Screen4Me: workflow *cont.*





## Screen4Me



Estimated reduction in records for author teams to have to screen: 50-80%



**Screen4Me**

**Demo time**





**Screen4Me**

**Any questions?**



## Questions you may have

### How do I report this in my Cochrane review?

You can find guidance on how to report the use of Screen4Me in your Cochrane review on the Cochrane Information Specialists portal. The guidance document is called: *Reporting S4M in Cochrane reviews*.



## Questions you may have

**Can I use Screen4Me for other search/screen activities e.g. register maintenance?**

There is no reason why you can't use S4M for other use cases such as specialised register maintenance. However, currently you can only be able to use the Cochrane Crowd component for search performed for Cochrane intervention reviews.

## Questions you may have

**If I use the Cochrane Crowd, who's responsibility is it to make sure they get acknowledged?**

It is the review group's responsibility (i.e. it is not the responsibility of the S4M or Cochrane Crowd core team). It is a good idea to make sure ahead of time who in the review group or author team will be responsible for adding the Crowd contributor names.



## Questions you may have

### How long should it all take?

The Known Assessment and RCT classifier components are very quick. Depending slightly on the size of the batch of results, these components should take less than half an hour to return results. The Crowd should be given two weeks to complete a S4M task.



## Questions you may have

**If I'm searching some unusual sources, will Screen4Me still work?**

S4M should work well for the major bibliographic databases and for ClinicalTrials.gov and ICTRP. If you are searching some unusual sources it is worth checking with the CIS Support Team before putting the results through S4M.

## Questions you may have

### Where can I find more information about Screen4Me?

The CIS Portal has the most information about Screen4Me. There you will find recordings of previous webinars, guidance on how to report S4M, and practical guidance on using S4M.



## Questions you may have

### How many Screen4Me projects can I have on the go at once?

If you are just using the Known Assessments and the RCT Classifier components, then you can have as many S4M projects on the go as you like. If you want to also use Cochrane Crowd, we currently have a limit of ten live projects (across all groups) running at the same time.



## Questions you may have

### Why not just allow people to use only Cochrane Crowd?

We are trying to be as efficient as possible with our use of the Crowd. We don't want to waste human effort on records that have already been screened or on records that are very easily identifiable as not RCTs by the RCT classifier.





**s4m@cochrane.org**

**Webinar recording:**

**An introduction to Screen4Me:**

**<https://www.youtube.com/watchv=2j5007yLVGU&feature=youtu.be>**

