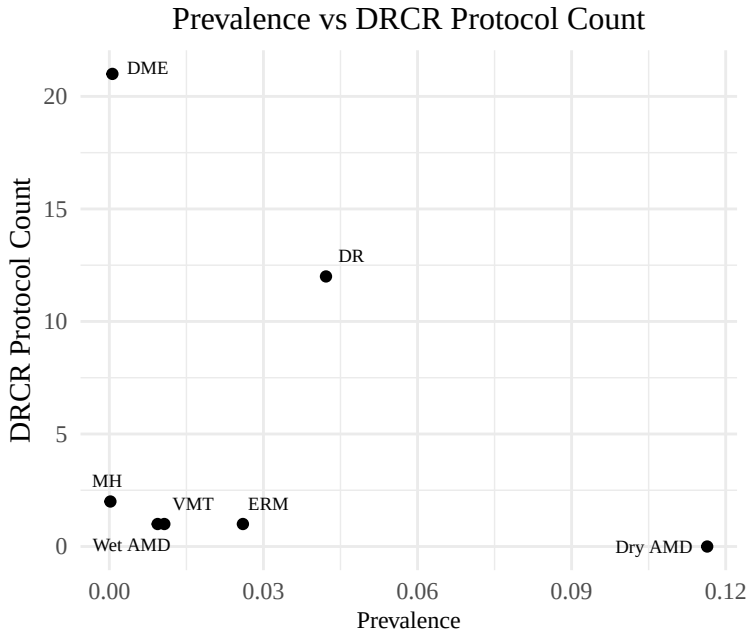
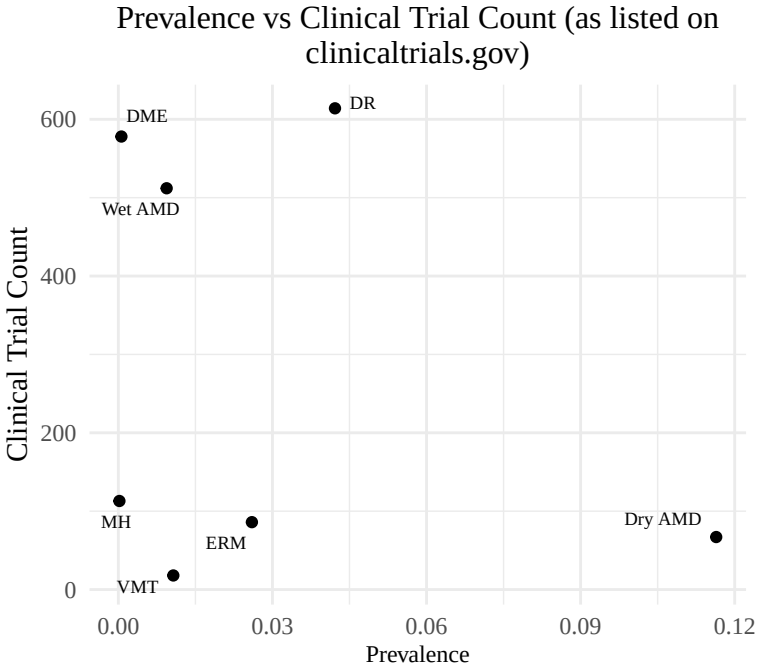
Metformin and AMD: Review of Current Literature

Prevalence, Clinical Trial Count, and DRCR Protocol Count



Dry AMD is a relatively common retinal disorder, but it is not currently the subject of DRCR protocols.



Dry AMD is the subject of relatively few trials registered on clinicaltrials.gov, considering its prevalence.

Note: Prevalence values are representative of adults ages 40 or older
Note: Insufficient data prevents a conclusive assessment of radiation retinopathy prevalence

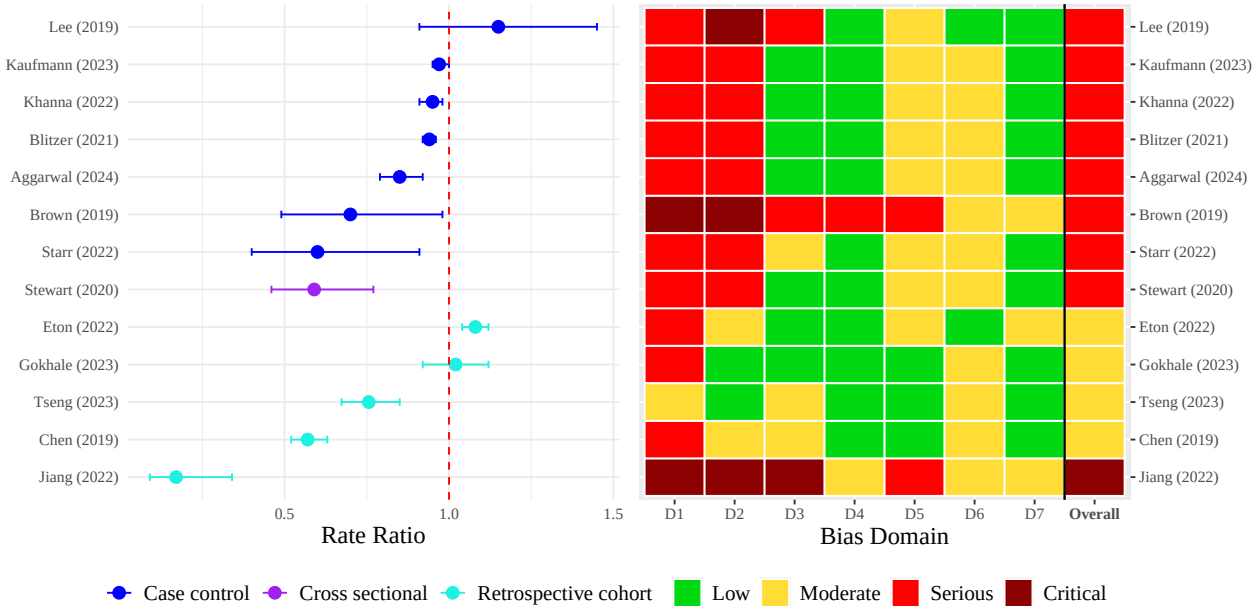
Prevalence Values Literature Review:

- Age Related Macular Degeneration (AMD) (Wet and Dry)
- Diabetic Retinopathy (DR)
- Diabetic Macular Edema (DME)
- Epiretinal Membrane (ERM)
- Vitreomacular Traction (VMT)
- Macular Hole (MH)
- Radiation Retinopathy (RR)

Number of Clinical Trials:

- Clinical Trials Website
- Data and Code Repository

Metformin's Effect on AMD: ROBINS-I Tool Bias Analysis



Bias Domains:

D1: Bias due to confounding
D2: Bias due to selection of participants
D3: Bias in classification of interventions
D4: Bias due to deviation from intended interventions
D5: Bias due to missing data
D6: Bias in measurement of outcomes
D7: Bias in selection of the reported result

Major limitations:

Lee: Case-control (selection bias)
Kaufmann: Case-control (selection bias)
Khanna: Case-control (selection bias)
Blitzer: Case-control (selection bias)
Aggarwal: Case-control (selection bias)
Brown: Case-control (selection bias)
Starr: Case-control (selection bias)
Stewart: Cross-sectional (no temporal information)
Eton: Unclear methods on time-dependent analysis
Gokhale: Young population (greater than 40 yr); short time frame for time-dependent analysis
Tseng: No time-dependent analysis
Chen: No time-dependent analysis
Jiang: No time-dependent analysis

ROBINS-I (Risk Of Bias In Non-randomized Studies – of Interventions) is used by the Cochrane Scientific Committee for assessing bias in non-randomized studies of interventions. [ROBINS-I Tool homepage]