Prevalence of skin mf and OV16+ versus number of MDA rounds (1 year post-MDA)
By measurement type (lines) and MDA coverage (columns) and pre-control CMFL (rows)

OV16 serology sensitivity 80% and specificity 99%, OV16 tested up to age 10, skin mf tested from age 5 onwards
Measurement type: Skin mf ----- OV16 hypothesis 1 --- OV16 hypothesis 2 ···· OV16 hypothesis 3

Number of MDA rounds
Prevalence of skin mf and OV16+ by age one year after varying number of MDA rounds (lines)

By pre-control endemicity (columns) and measurement type (rows)

OV16 serology sensitivity 80% and specificity 99%, MDA coverage 60%
Prevalence of skin mf and OV16+ by age one year after varying number of MDA rounds (lines)

By pre-control endemicity (columns) and measurement type (rows)

OV16 serology sensitivity 80% and specificity 99%, MDA coverage 70%
Prevalence of skin mf and OV16+ by age one year after varying number of MDA rounds (lines)

By pre-control endemicity (columns) and measurement type (rows)

OV16 serology sensitivity 80% and specificity 99%, MDA coverage 80%
Probability of elimination versus number of MDA rounds

By MDA coverage (lines) and pre-control CMFL (panels)

MDA coverage

- 80%
- 70%
- 60%

Number of MDA rounds

Probability of elimination (%)
Probability of elimination versus OV16+ prevalence (1 year post–MDA)
By MDA coverage (lines) and OV16 hypothesis (columns) pre–control CMFL (rows)
OV16 serology sensitivity 80% and specificity 99%, OV16 tested up to age 10

MDA coverage
- 80%
- 70%
- 60%

OV16 hypothesis 1
OV16 hypothesis 2
OV16 hypothesis 3
CMFL 5 mf/ss
CMFL 10 mf/ss
CMFL 30 mf/ss
CMFL 55 mf/ss
CMFL 80 mf/ss

Prevalence of OV16+ (%)
Probability of elimination versus OV16+ prevalence (1 year post–MDA)

By pre−control CMFL (lines) and sample population (columns) and OV16 hypothesis (rows)

OV16 serology sensitivity 80% and specificity 99%, MDA coverage 60%

Pre−control CMFL (mf/ss) — 80 — 55 — 30 — 10 — 5

Prevalence of OV16+ (%)

Probability of elimination (%)
Probability of elimination versus OV16+ prevalence (1 year post–MDA)

By pre–control CMFL (lines) and sample population (columns) and OV16 hypothesis (rows)

OV16 serology sensitivity 80% and specificity 99%, MDA coverage 70%

Pre–control CMFL (mf/ss) – – 80 – – 55 – – 30 – – 10 – – 5

Pre−control CMFL (mf/ss) 0 10 20 30 40

OV16 hypothesis 1

Pre−control CMFL (mf/ss) 0 10 20 30 40

OV16 hypothesis 2

Pre−control CMFL (mf/ss) 0 10 20 30 40

OV16 hypothesis 3

Questions:

1. What is the relationship between pre−control CMFL (mf/ss) and the probability of elimination?
2. How does the OV16 hypothesis affect the probability of elimination?
3. What does the MDA coverage indicate in the context of eliminating OV16+?

Answer:

1. The probability of elimination decreases as the pre−control CMFL (mf/ss) increases.
2. The OV16 hypothesis significantly affects the probability of elimination, with different curves for each hypothesis indicating varying outcomes.
3. The MDA coverage of 70% suggests that the intervention is moderately effective in reducing the prevalence of OV16+.

Graphical Representation:

The graphs show the probability of elimination (%) versus the prevalence of OV16+ (%). The x-axis represents the prevalence of OV16+, while the y-axis represents the probability of elimination. Each hypothesis is represented by a distinct line pattern, allowing for a comparative analysis of their effects on elimination probability.
Probability of elimination versus OV16+ prevalence (1 year post–MDA)

By pre–control CMFL (lines) and sample population (columns) and OV16 hypothesis (rows)

OV16 serology sensitivity 80% and specificity 99%, MDA coverage 80%