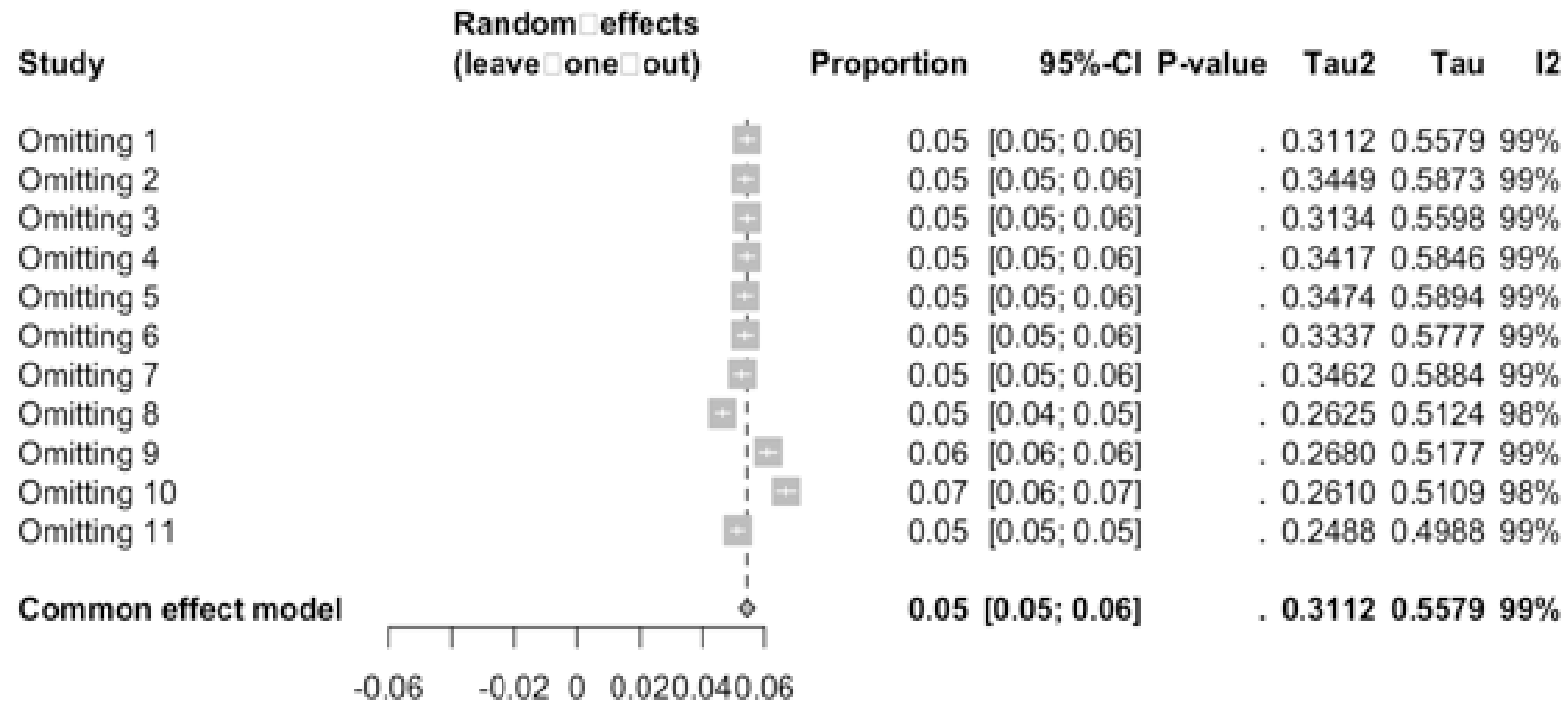
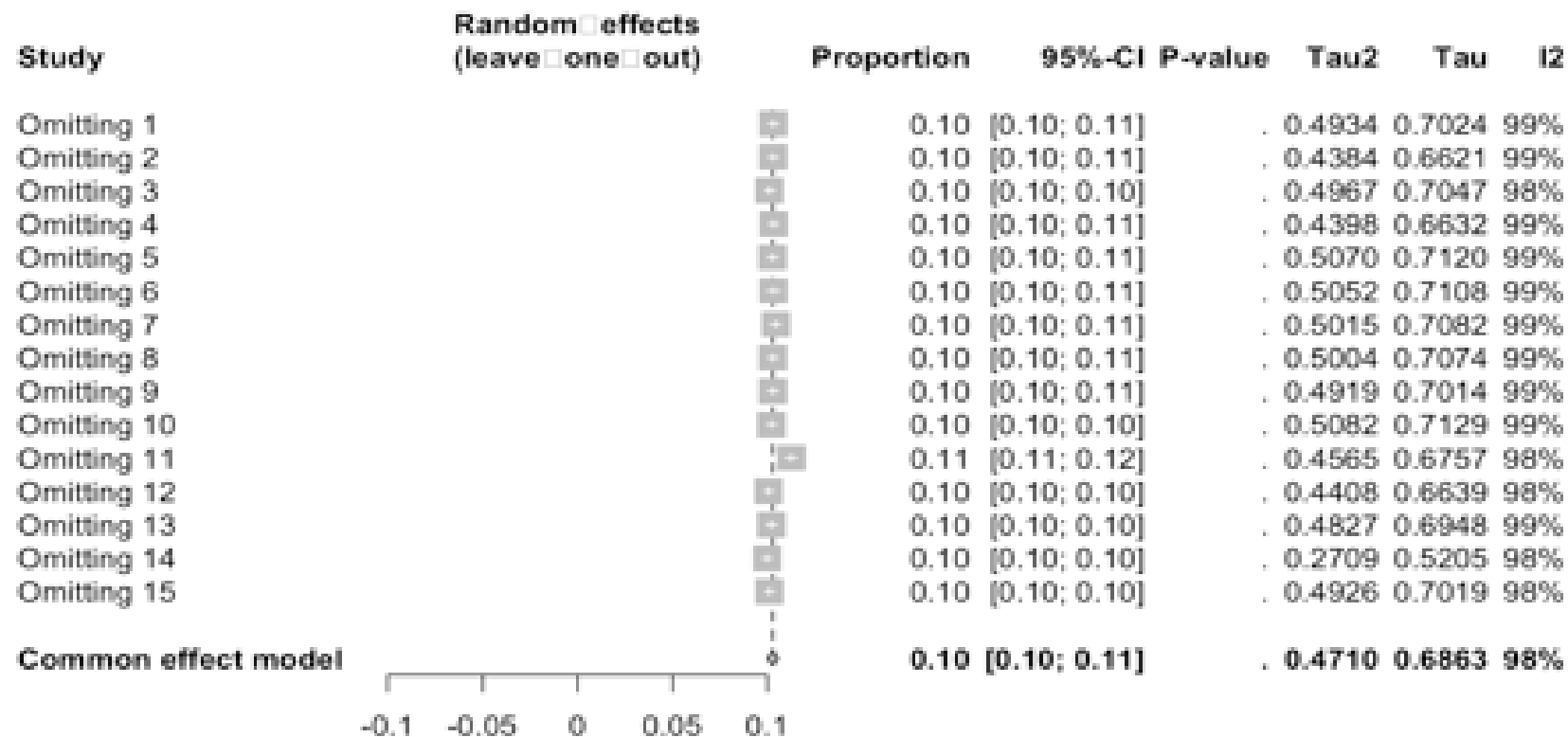




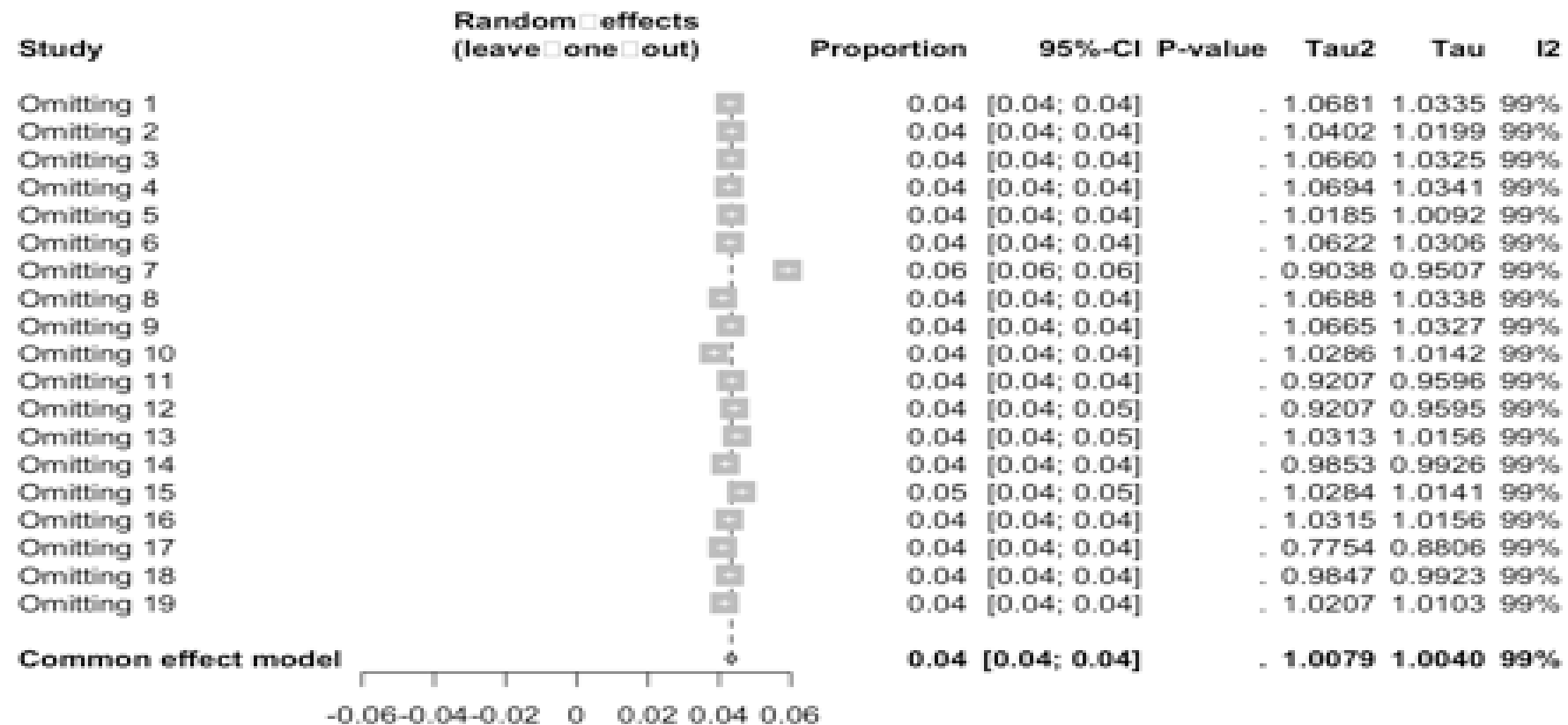
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Supplementary Figure 1: Sensitivity analysis for RTRI coverage



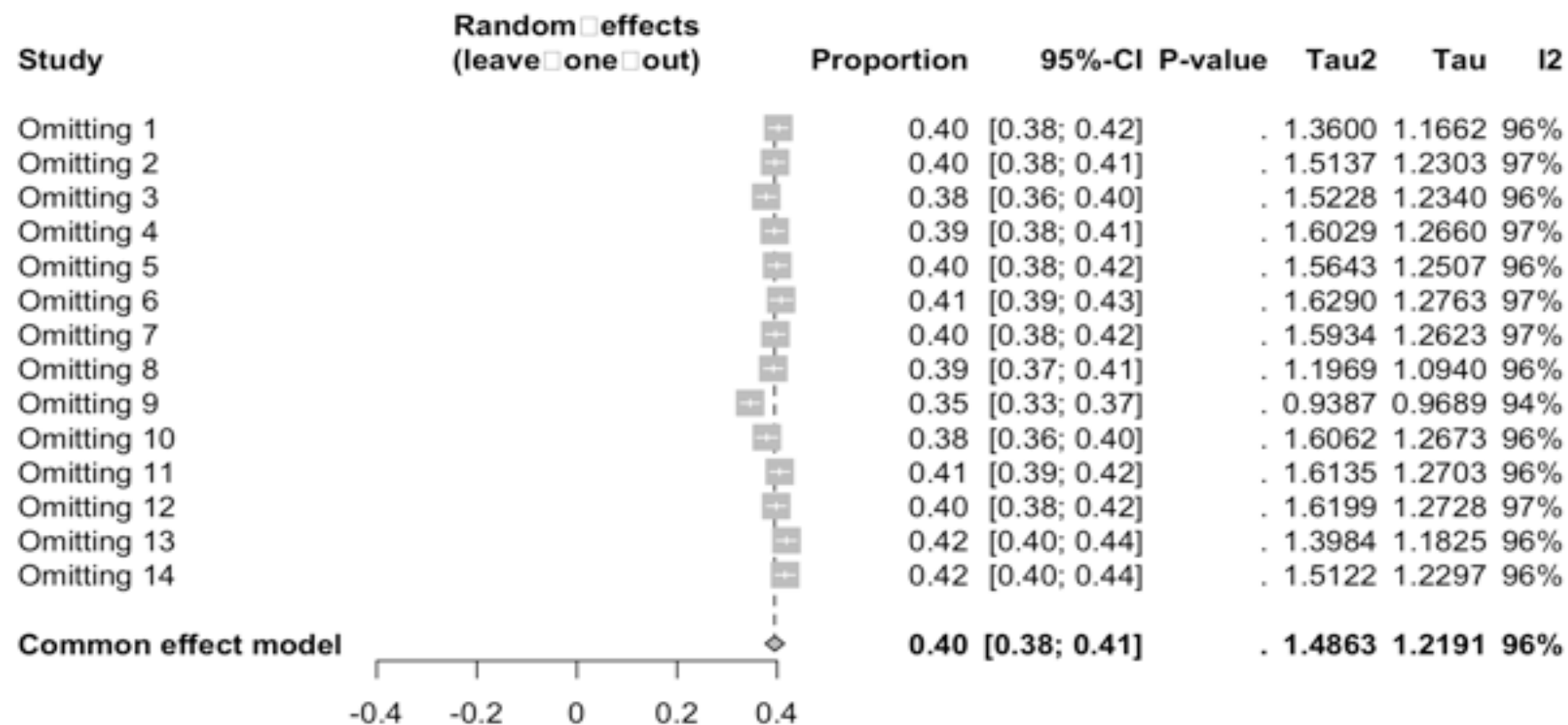
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Supplementary Figure 2: Sensitivity analysis of the prevalence of Preliminary-Recen (RTRI)



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Supplementary Figure 3: Sensitivity analysis of the Prevalence of RITA-recent HIV i



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Supplementary Figure 4: Sensitivity analysis of the Prevalence of Recent infection

Supplementary Table 1 Search strategies

1. BOOLEAN STRATEGY:
a. Core concept 1:
A. ("HIV Infections"[MeSH] OR HIV[tiab] OR "HIV-positive"[tiab] OR "newly diagnosed"[tiab]) B. ("recency testing"[tiab] OR RTRI[tiab] OR RITA[tiab] OR "recent infection testing"[tiab] OR "HIV incidence testing"[tiab]) 1312 C. ("partner notification"[MeSH Terms] OR partner notification[tiab] OR partner services[tiab] OR partner tracing[tiab] OR index testing[tiab]) 1563 D. ("developing countries"[MeSH] OR "low-income countries"[tiab] OR "middle-income countries"[tiab] OR "Africa"[tiab] OR "Asia"[tiab] OR "Latin America"[tiab] OR "resource-limited"[tiab] OR "low-resource"[tiab]) 402268 E. ("2018/01/01"[Date - Publication] : "2024/11/30"[Date - Publication]) or ((("HIV Infections"[MeSH] OR HIV[tiab] OR "HIV-positive"[tiab] OR "newly diagnosed"[tiab]) AND ("recency testing"[tiab] OR RTRI[tiab] OR RITA[tiab] OR "recent infection testing"[tiab] OR "HIV incidence testing"[tiab]) AND ("partner notification"[MeSH Terms] OR partner notification[tiab] OR partner services[tiab] OR partner tracing[tiab] OR index testing[tiab]) AND ("developing countries"[MeSH] OR "low-income countries"[tiab] OR "middle-income countries"[tiab] OR "Africa"[tiab] OR "Asia"[tiab] OR "Latin America"[tiab] OR "resource-limited"[tiab] OR "low-resource"[tiab]) AND ("2018/01/01"[Date - Publication] : "2024/11/30"[Date - Publication]))
2nd
(
("HIV Infections"[Mesh] OR HIV[tiab] OR "HIV-positive"[tiab] OR "newly diagnosed"[tiab]) AND ("recency testing"[tiab] OR RTRI[tiab] OR RITA[tiab] OR "recent infection testing"[tiab] OR "HIV incidence testing"[tiab]) AND ("Contact Tracing"[Mesh] OR "Sexual Partners"[Mesh] OR "Disease Notification"[Mesh]) AND

("Developing Countries"[Mesh] OR "low-income countries"[tiab] OR "middle-income countries"[tiab] OR "Africa"[tiab] OR "Asia"[tiab] OR "Latin America"[tiab] OR "resource-limited"[tiab] OR "low-resource"[tiab])

)

AND

("2018/01/01"[Date - Publication] : "2024/11/30"[Date - Publication])

PUBMED

A=34

(("HIV Infections"[Mesh] OR HIV[tiab] OR "HIV-positive"[tiab] OR "newly diagnosed"[tiab]) AND ("recency testing"[tiab] OR RTRI[tiab] OR RITA[tiab] OR "recent infection testing"[tiab] OR "HIV incidence testing"[tiab]) AND ("Developing Countries"[Mesh] OR "low-income countries"[tiab] OR "middle-income countries"[tiab] OR "Africa"[Mesh] OR "Asia"[Mesh] OR "Latin America"[Mesh] OR "resource-limited"[tiab])) AND ("2018/01/01"[Date - Publication] : "2024/11/30"[Date - Publication])

B =209

(("HIV Infections"[Mesh] OR HIV[tiab] OR "HIV-positive"[tiab] OR "newly diagnosed"[tiab]) AND ("partner notification"[tiab] OR "partner services"[tiab] OR "partner tracing"[tiab] OR "index testing"[tiab] OR "contact tracing"[tiab]) AND ("Developing Countries"[Mesh] OR "low-income countries"[tiab] OR "middle-income countries"[tiab] OR "Africa"[Mesh] OR "Asia"[Mesh] OR "Latin America"[Mesh] OR "resource-limited"[tiab])) AND ("2018/01/01"[Date - Publication] : "2024/11/30"[Date - Publication])

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