Figure S1. Overview of the study selection process for meta-analysis

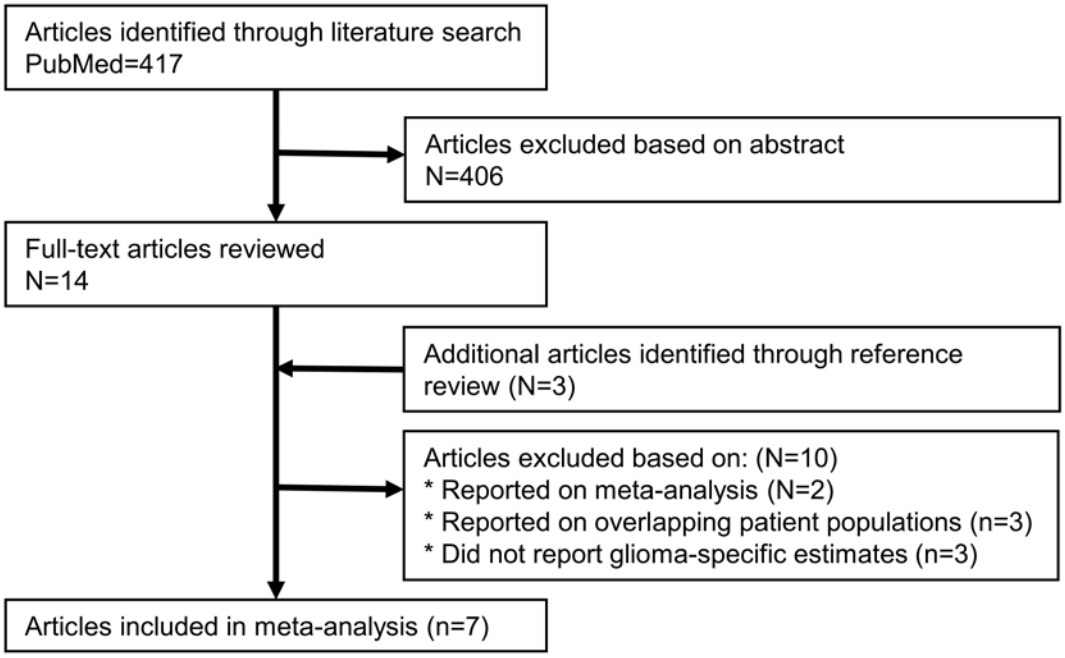


Figure S2A. Forest plot representing the meta-analysis of six studies on aspirin use and glioma risk.

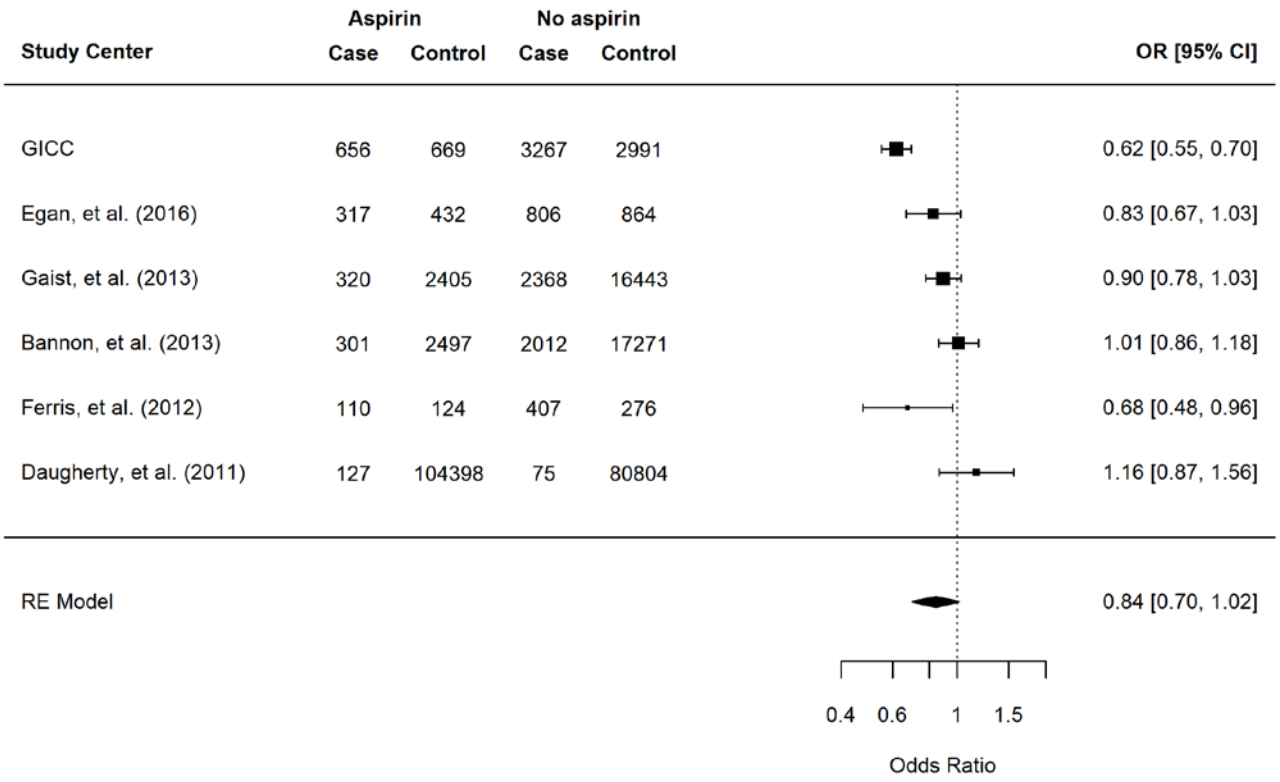


Figure S2B. Funnel plot representing the meta-analysis of six studies on aspirin use and glioma risk.

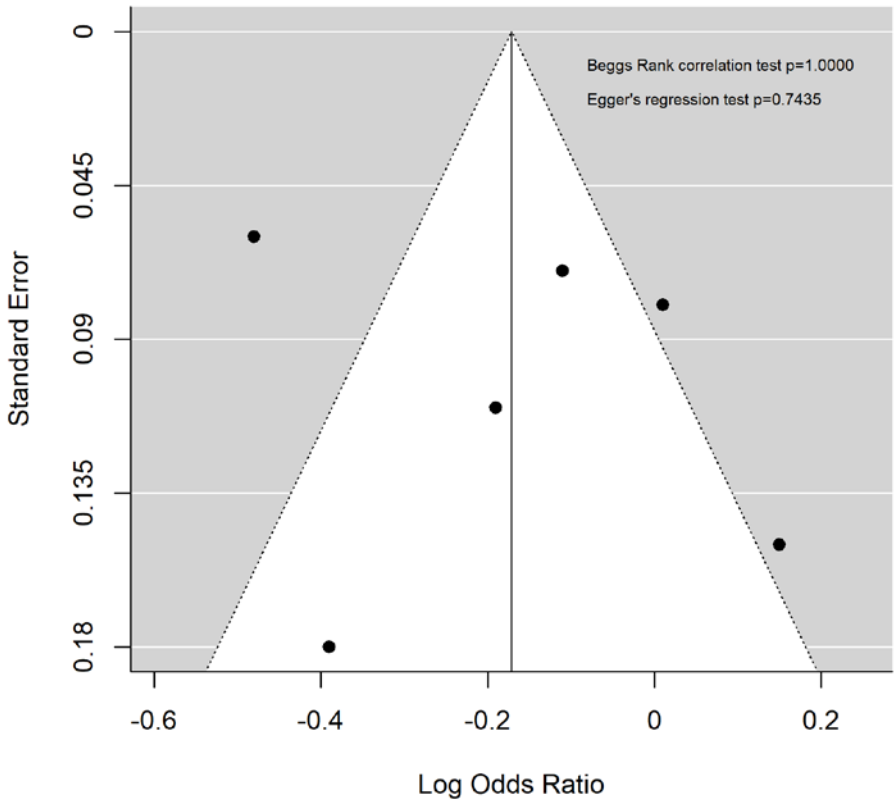


Figure S3A. Forest plot representing the meta-analysis of four studies on aspirin use and glioma risk, including studies based on US patients only.

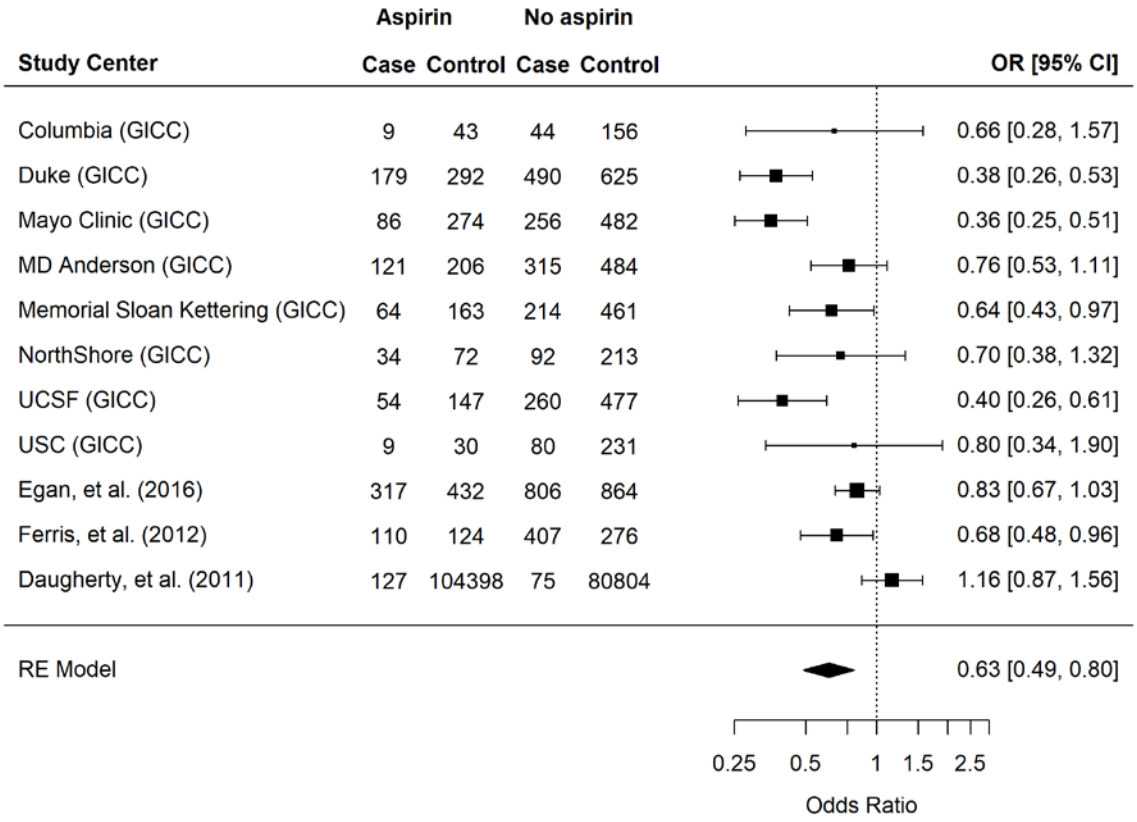


Figure S3B. Funnel plot representing the meta-analysis of four studies on aspirin use and glioma risk, including studies based on US patients only.

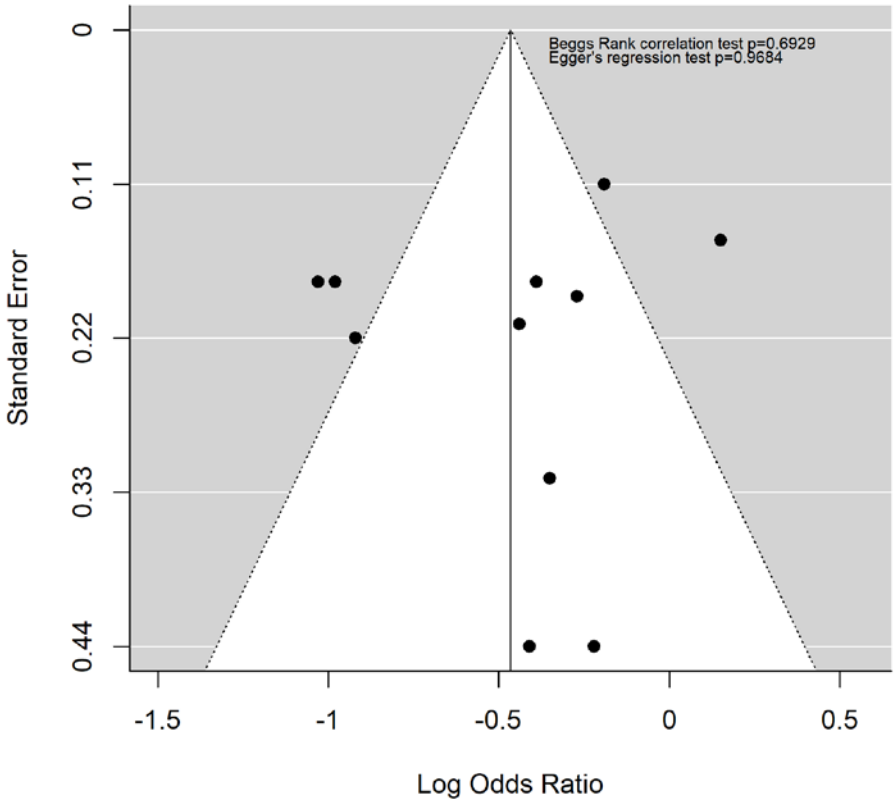
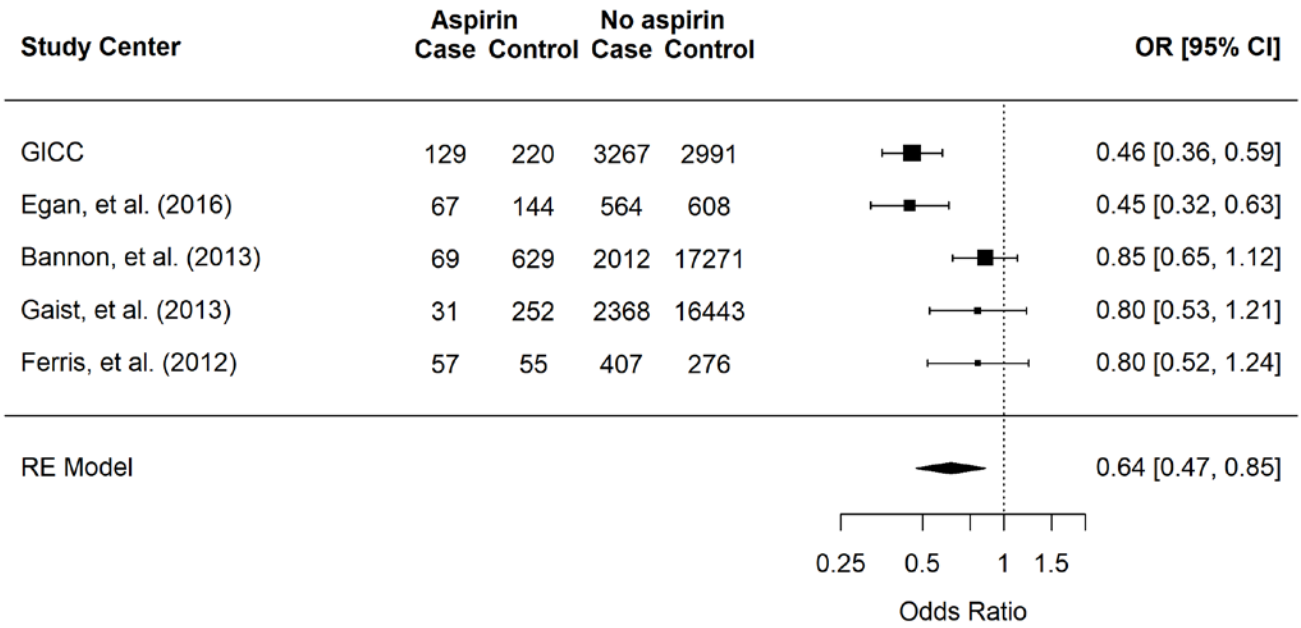


Figure S4A. Forest plot representing the meta-analysis of five studies on long-term aspirin use and glioma risk.



Gaist et al. and Ferris et al. defined long-term as ≥5 years; GICC and Egan et al. defined long-term as ≥10 years; Bannon et al. as ≥1573 daily doses (~4.3 years).

Figure S4B. Funnel plot representing the meta-analysis of five studies on long-term aspirin use and glioma risk.

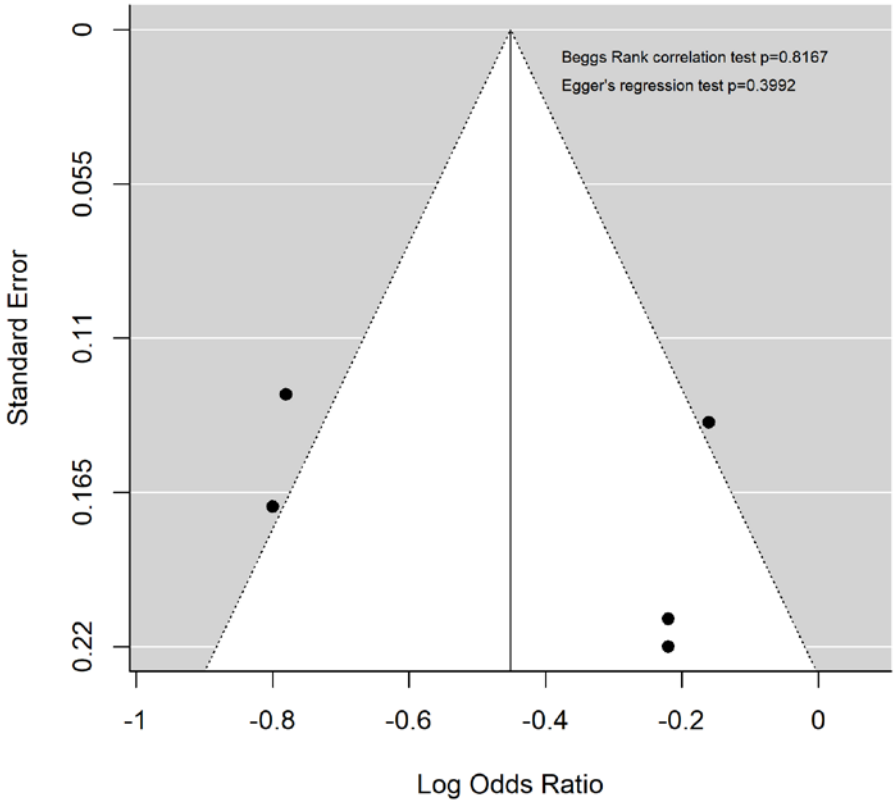
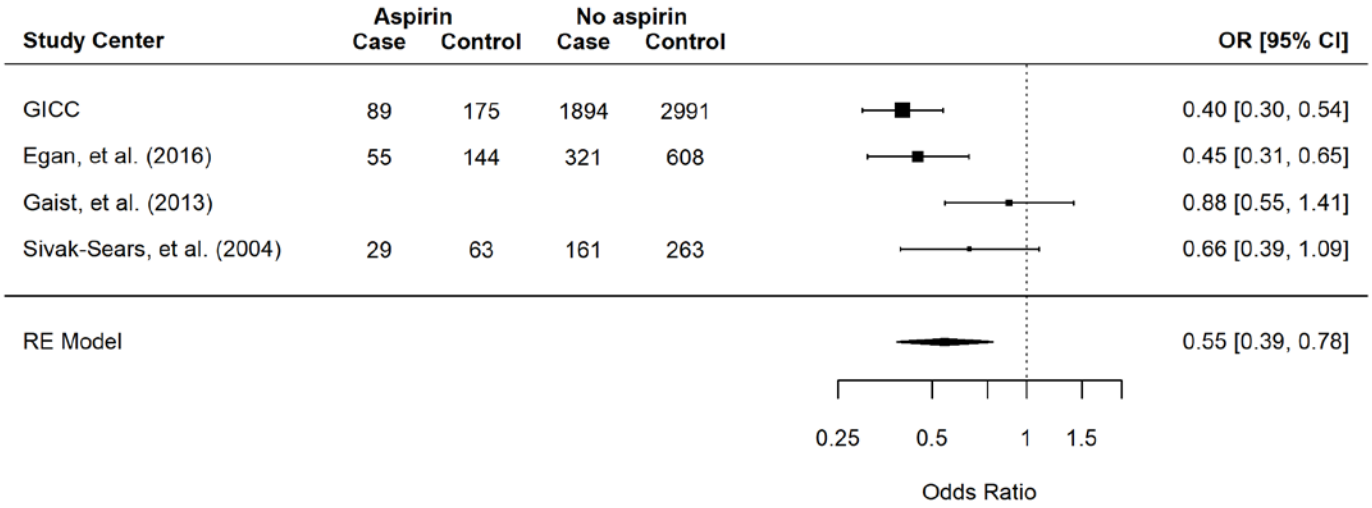


Figure S5A. Forest plot representing the meta-analysis of four studies on long-term aspirin use and glioblastoma risk.



Gaist et al. defined long-term as ≥5 years; GICC, Egan, et al., and Sivak-Sears, et al. defined long-term as ≥10 years; Counts not available for Gaist, et al.

Figure S5B. Forest plot representing the meta-analysis of four studies on long-term aspirin use and glioblastoma risk.

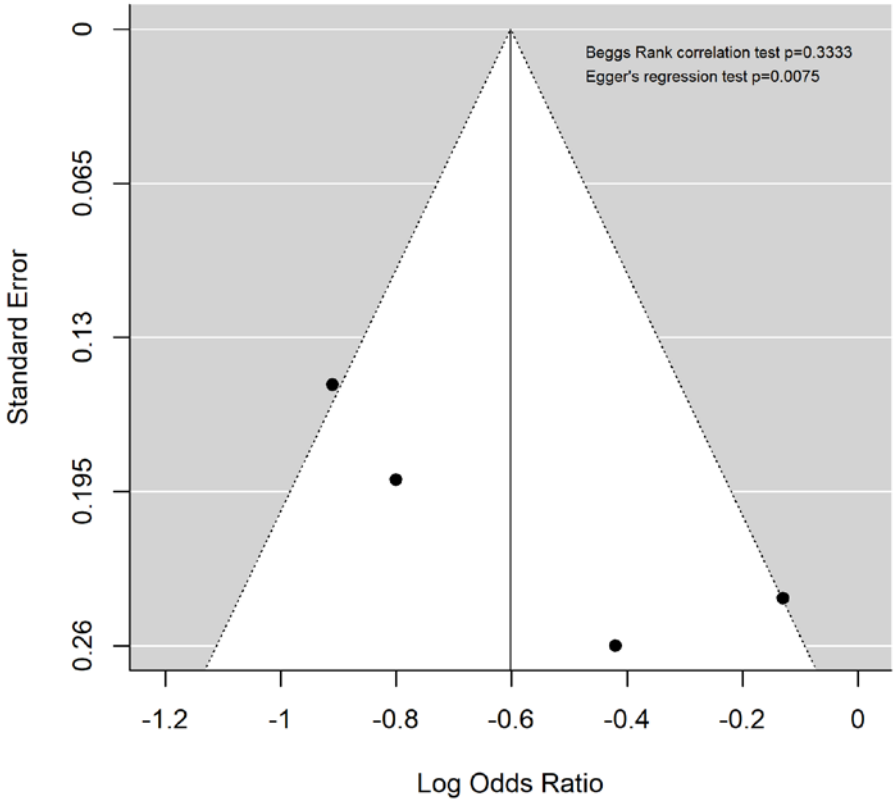


Figure S6A. Forest plot representing the meta-analysis of seven studies on NSAID use and glioma risk.

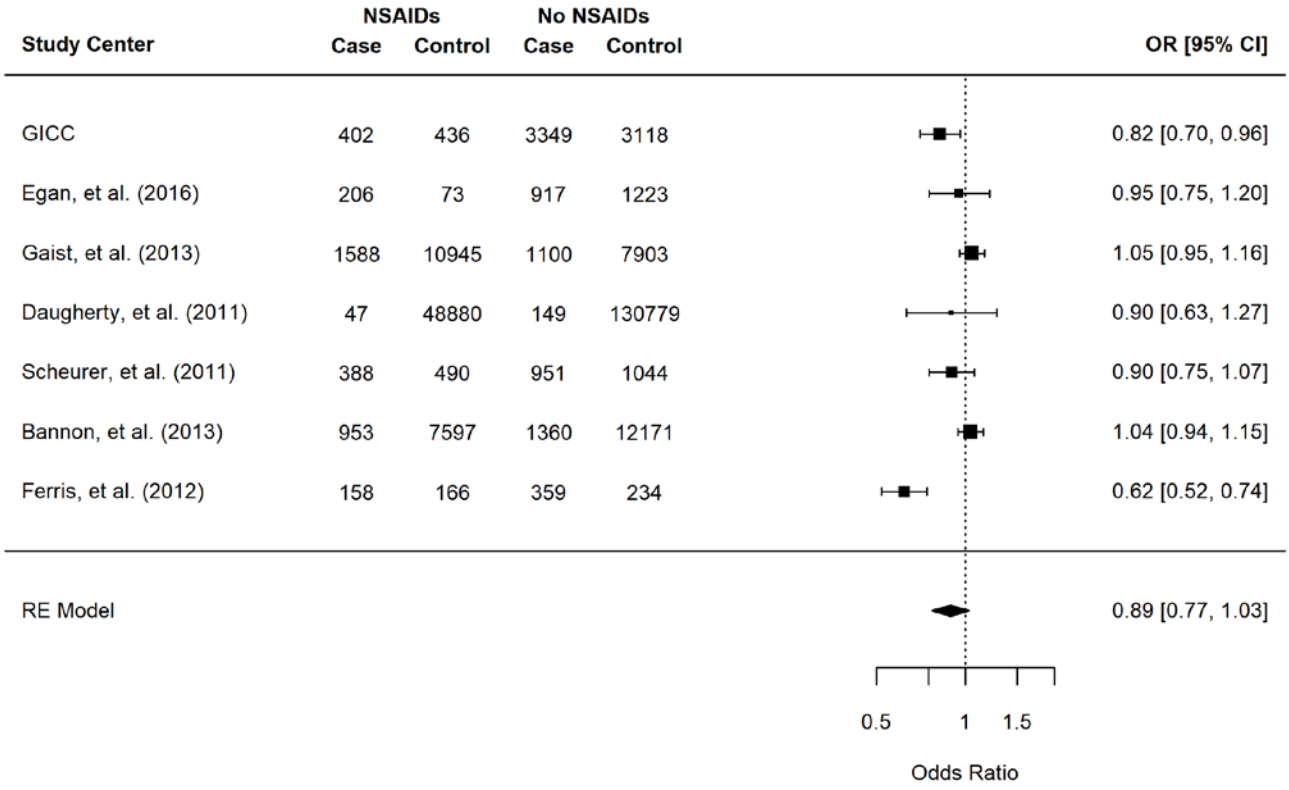


Figure S6B. Forest plot representing the meta-analysis of seven studies on NSAID use and glioma risk.

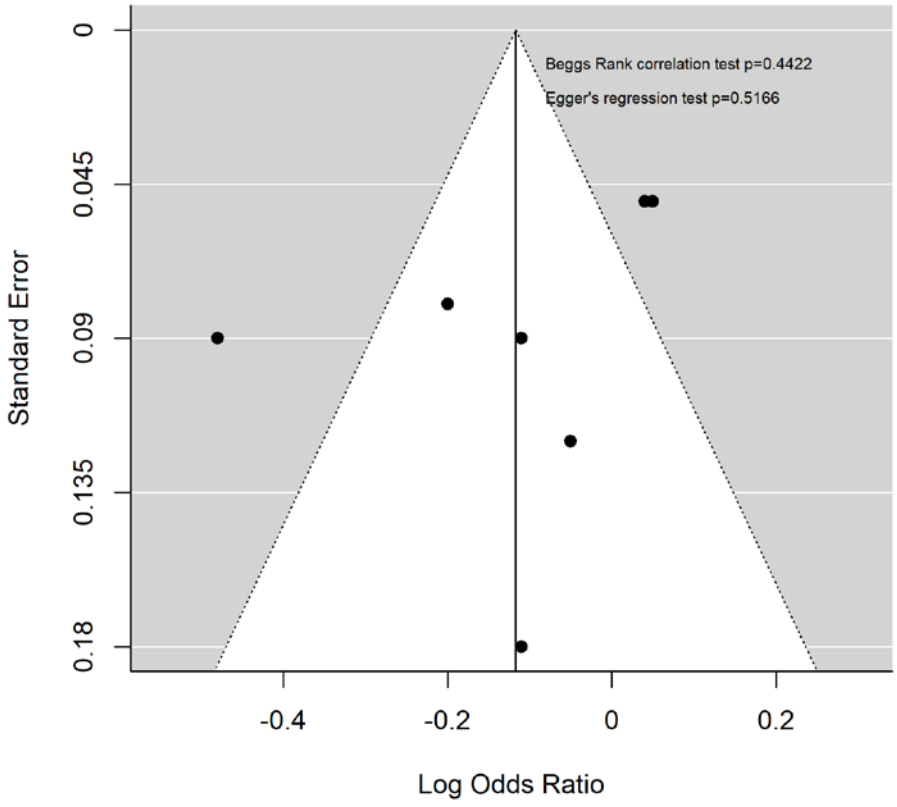


Figure S7A. Forest plot representing the meta-analysis of five studies on non-aspirin NSAID use and glioma risk.

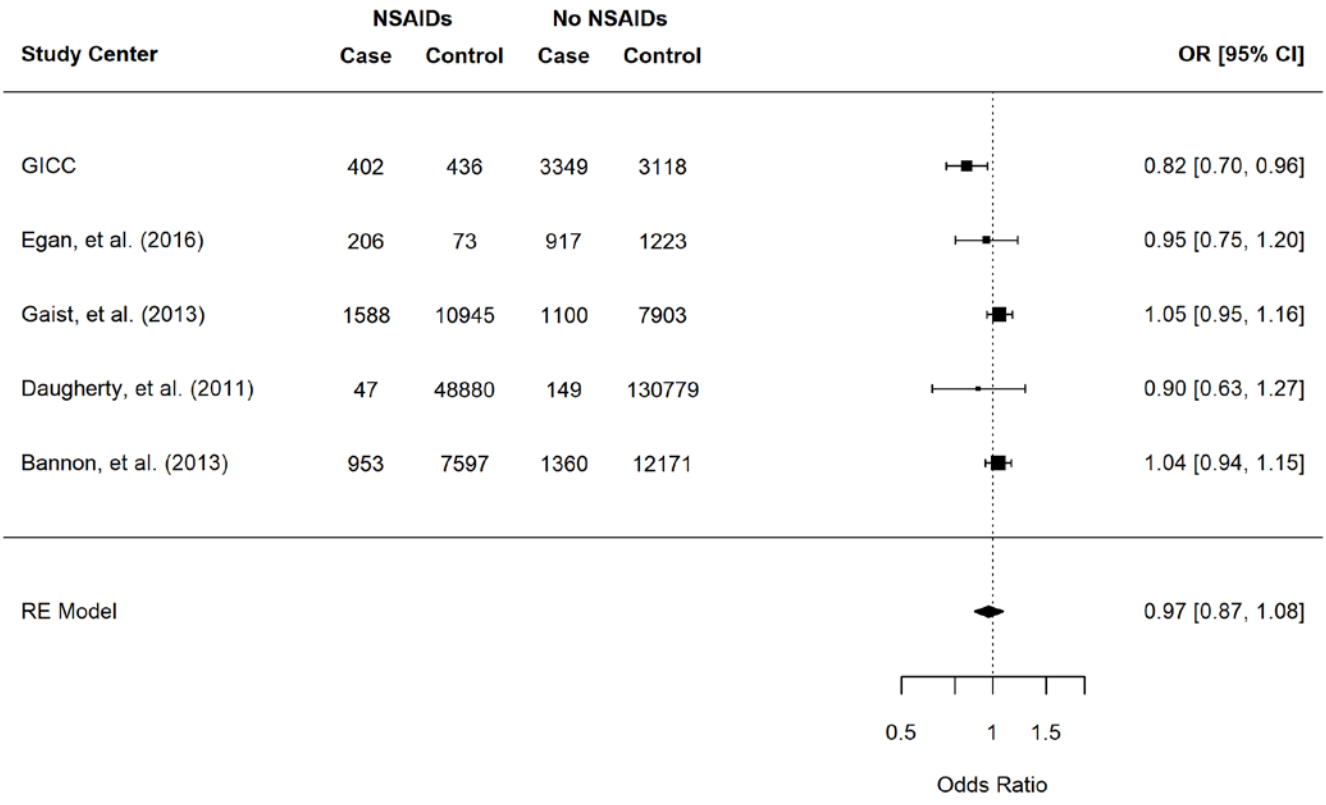


Figure S7B. Forest plot representing the meta-analysis of five studies on non-aspirin NSAID use and glioma risk.

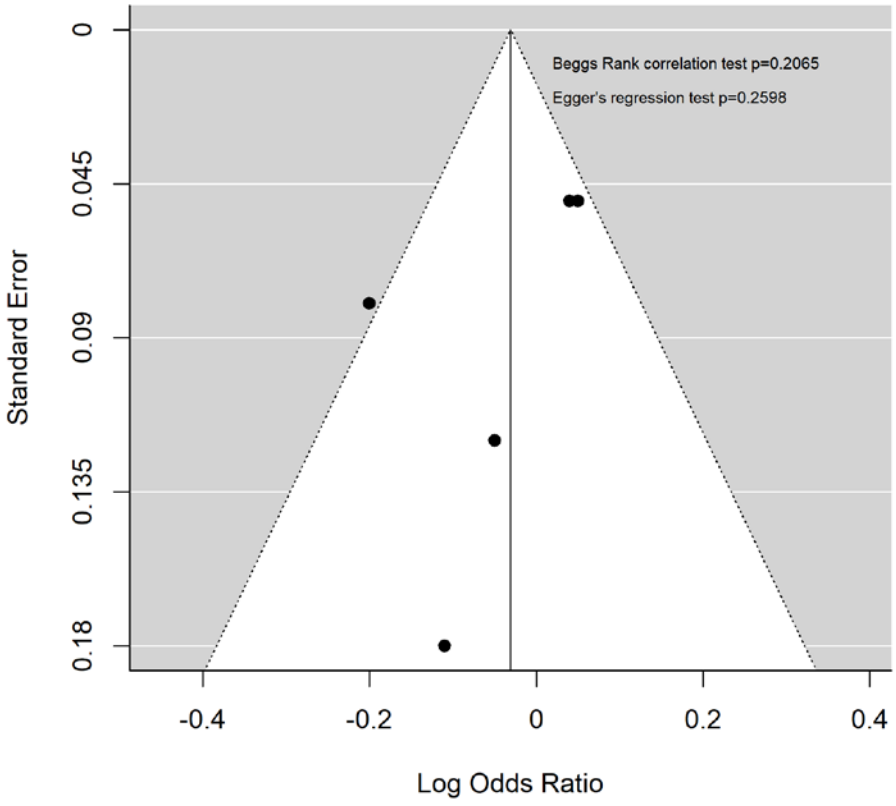


Table S1. Details and characteristics of included studies on aspirin, non-steroidal anti-inflammatory drugs, and glioma

First Author (Year) *Study design*	Phenotype	Exposures	Risk measure	Time points and exposure definition	Source of study population [Country]	Glioma cases	GBM cases (% of all glioma cases)	Controls (Type)	Adjustments used in analyses	Newcastle-Ottawa quality score (1)
Bannon, et al. (2013) (2) *Retrospective case control*	All glioma	Aspirin; Non-aspirin NSAIDs	Odds ratio	Aspirin: Ever use vs never use 1-224 daily doses [DD] vs never use 225-728 DD vs never use 729-1572 DD vs never use >= 1573 DD vs never use Non-aspirin NSAIDs: Ever use vs never use 1-28 DD vs never use 29-65 DD vs never use 66-212 DD vs never use >= 213 DD vs never use	U.K.-based Clinical Practice Research Datalink (CPRD) - 1987-2009 [UK]	2,313	Unknown	19,768 (Population/ national primary care database)	Patients are matched on age, gender and general practitioner practice (geographic region)	7
Daugherty, et al. (2011) (3) *Cohort*	All glioma; GBM	Aspirin; Non-aspirin NSAIDs	Hazard ratio	Regular use vs never use >2-6 times/week vs never use >=7 times/week vs never use	National Institutes of Health (NIH)-AARP Diet and Health Study [US]	341	264 (77.4%)	302,426	Adjusted for sex, race, and history of heart disease using age as time metric	7
Egan, et al. (2016) (4) *Case-control study recruiting incidence cases and matched controls*	All Glioma; GBM; LGG	Acetaminophen; Aspirin; Non-aspirin NSAIDs; COX2-inhibitors	Odds ratio	Regular use vs never use <3 years of regular use vs never use 4-9 years of regular use vs never use >=10 years of regular use vs never use	Glioma South-East (GliomaSE) case–control study [US]	1,123	509 (45.3%)	1,296 (Community [~90%] and family [~10%])	Adjusted for age, gender, race, education, and state of residence	6
Ferris, et al. (2012) (5) *Case-control study recruiting incidence cases and frequency matched controls*	All glioma	Aspirin; All NSAIDs	Odds ratio	>6 months of regular use vs <= 6 months of regular use 7-24 months of regular use vs <= 6 months of regular use 25-60 months of regular use vs <= 6 months of regular use 61-120 months of regular use vs <= 6 months of regular use	Columbia University Medical Center (CUMC) and the University of California San Francisco (Northern California Cancer Center's rapid case ascertainment system) [US]	517	317 (61.3%)	400 (Hospital)	Adjusted for individual NSAIDs, acetaminophen, statins, age, race, sex and center.	6
Gaist, et al. (2013) (6) *Retrospective case control*	All glioma; GBM	Aspirin; Non-aspirin NSAIDs	Odds ratio	Ever use vs never use Recent use vs never use Past use vs never use <2 vs never use (recent use)	Danish Cancer Registry (DCR), Civil Registration System, National Prescription Registry, Danish National Registry of	2,688	1561 (58.1%)	18,848 (Population)	Matched on birth year and sex. Adjusted for education, diabetes, stroke, allergy, asthma,	7

				2-4 vs never use (recent use) >=5 vs never use (recent use)	Patients (DNRP), and Danish education and fertility registries within Statistics Denmark. [Denmark]				use of statins, antihistamines, and anti-asthma medication	
Scheurer, et al. (2011) (7) *Case-control study recruiting incidence cases and matched controls*	All glioma; GBM; Anaplastic glioma; LGG	All anti-inflammatory	Odds ratio	>=6 months of regular use vs <6 months of use	San Francisco Adult Glioma Study and Harris County case-control study [US]	1,339	806 (60.2%)	1,534 (Population, recruited with random digit dialing)	Adjusted for age, race, sex, education, and study series.	7
Sivak-Sears, et al. (2004) (8) *Case-control study recruiting incidence cases and frequency matched controls*	All glioma	Aspirin	Odds ratio	>=10 years vs never use Regular vs never use	San Francisco Adult Glioma Study [US]	510	241 (47.3%)	541 (Population, recruited with random digit dialing)	Adjusted for Age	7

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