Supplemental table 1. Associations of aspirin and other NSAIDs with absolute dense area, by menopausal status

Intake category	All women		Premenopausal		Postmenopausal	
	N	Full Models, β and 95% CI[a]	N	Full Models, β and 95% CI[b]	N	Full Models, β and 95% CI[c]
ASPIRIN USE						
Regular use (≥2 times/week)						
Non-users	1348	Reference	867	Reference	481	Reference
Past users	965	0.10 (-0.08, 0.28)	363	0.01 (-0.23, 0.26)	602	0.17 (-0.09, 0.43)
Current users						
<5 yrs	339	0.35 (0.11, 0.59)	177	0.51 (0.20, 0.82)	162	0.13 (-0.24, 0.51)
≥5 yrs	1023	0.09 (-0.10, 0.28)	286	0.06 (-0.23, 0.35)	737	0.08 (-0.18, 0.34)
p-trend		0.16		0.11		0.83
Frequency of use						
Non-users	1343	Reference	862	Reference	481	Reference
Past users	1072	0.12 (-0.06, 0.30)	389	0.07 (-0.17, 0.32)	683	0.15 (-0.11, 0.41)
Current users						
1 day/wk	632	0.25 (0.04, 0.46)	264	0.36 (0.06, 0.66)	368	0.14 (-0.16, 0.45)
2-3 days/wk	310	0.16 (-0.11, 0.42)	114	0.04 (-0.34, 0.43)	196	0.19 (-0.18, 0.55)
4-5 days/wk	142	0.23 (-0.14, 0.59)	37	0.36 (-0.28, 1.00)	105	0.10 (-0.35, 0.56)
6+ days/wk	457	0.10 (-0.14, 0.33)	107	0.23 (-0.17, 0.62)	350	0.02 (-0.28, 0.33)
p-trend		0.47		0.40		0.86
Dosage (number of tablets per week)						
Non-users	759	Reference	390	Reference	369	Reference
Past users						
<2	410	0.34 (0.06, 0.61)	108	0.33 (-0.16, 0.82)	302	0.32 (-0.02, 0.65)
2-5	124	0.44 (0.03, 0.85)	24	0.31 (-0.55, 1.18)	100	0.44 (-0.03, 0.91)
>5	87	0.16 (-0.32, 0.64)	13	-1.12 (-2.27, 0.02)	74	0.39 (-0.14, 0.92)
p-trend		0.74		0.09		0.19
Current users						
<2	450	0.29 (0.03, 0.55)	154	0.43 (0.01, 0.84)	296	0.18 (-0.15, 0.51)
2-5	332	0.38 (0.09, 0.67)	65	0.23 (-0.33, 0.80)	267	0.36 (0.01, 0.70)
>5	379	0.06 (-0.22, 0.33)	100	0.42 (-0.05, 0.89)	279	-0.15 (-0.49, 0.18)
p-trend		0.94		0.18		0.19

Intake category	All women		Premenopausal		Postmenopausal	
	N	Full Models, β and 95% CI[a]	N	Full Models, β and 95% CI[b]	N	Full Models, β and 95% CI[c]
Duration (years of use by status)						
Non-users	1348	Reference	867	Reference	481	Reference
Past users						
<2	36	-0.03 (-0.69, 0.64)	17	-0.05 (-0.96, 0.86)	19	-0.06 (-1.02, 0.89)
2-5	433	0.08 (-0.14, 0.30)	215	0.06 (-0.23, 0.34)	218	0.11 (-0.23, 0.44)
>5	496	0.14 (-0.09, 0.37)	131	-0.05 (-0.42, 0.33)	365	0.23 (-0.07, 0.54)
p-trend		0.40		0.93		0.32
Current users						
<2	142	0.23 (-0.12, 0.57)	81	0.41 (-0.02, 0.84)	61	-0.04 (-0.60, 0.51)
2-5	253	0.37 (0.09, 0.64)	126	0.45 (0.09, 0.81)	127	0.23 (-0.18, 0.64)
>5	967	0.10 (-0.09, 0.30)	256	0.07 (-0.23, 0.37)	711	0.09 (-0.17, 0.36)
p-trend		0.19		0.67		0.28
NSAIDs						
Regular use (≥2 times/week)						
Non-users	1310	Reference	479	Reference	831	Reference
Past users	680	0.07 (-0.13, 0.26)	367	-0.06 (-0.32, 0.21)	313	0.19 (-0.10, 0.48)
Current users						
<5 yrs	877	0.07 (-0.11, 0.24)	436	-0.00 (-0.24, 0.24)	441	0.11 (-0.14, 0.35)
≥5 yrs	599	0.11 (-0.10, 0.32)	313	0.05 (-0.23, 0.33)	286	0.15 (-0.17, 0.46)
p-trend		0.29		0.68		0.33
Frequency of use						
Non-users	1301	Reference	471	Reference	830	Reference
Past users	678	0.07 (-0.12, 0.27)	365	-0.04 (-0.30, 0.23)	313	0.18 (-0.11, 0.47)
Current users						
1 day/wk	566	0.22 (0.01, 0.42)	337	0.07 (-0.20, 0.33)	229	0.35 (0.04, 0.67)
2-3 days/wk	429	0.09 (-0.14, 0.31)	255	0.11 (-0.18, 0.41)	174	-0.01 (-0.36, 0.34)
4-5 days/wk	131	-0.08 (-0.44, 0.28)	59	0.03 (-0.48, 0.54)	72	-0.17 (-0.68, 0.34)
6+ days/wk	274	-0.05 (-0.31, 0.22)	74	-0.23 (-0.69, 0.24)	200	0.04 (-0.29, 0.37)
p-trend		0.61		0.83		0.70

Intake category	All women			Premenopausal			Postmenopausal		
	N	Full Models, β and 95% CI[a]		N	Full Models, β and 95% CI[b]		N	Full Models, β and 95% CI[c]	
ANY NSAIDs USE									
Regular use (≥2 times/week)									
Non-users	602	Reference		287	Reference		315	Reference	
Past users	892	-0.02 (-0.23, 0.19)		432	-0.17 (-0.46, 0.12)		460	0.14 (-0.16, 0.44)	
Current users									
<5 yrs	895	0.11 (-0.10, 0.32)		466	0.02 (-0.27, 0.30)		429	0.21 (-0.10, 0.52)	
≥5 yrs	1528	0.05 (-0.14, 0.24)		569	-0.00 (-0.27, 0.27)		959	0.10 (-0.17, 0.37)	
p-trend		0.39			0.52			0.65	

Abbreviations: CI- confidence interval; NSAIDs-non-steroid anti-inflammatory drugs

[a] Adjusted for age (continuous), BMI (continuous), age at menarche (<12, 12, 13, >13), menopausal status/postmenopausal hormone use (premenopausal, postmenopausal/no hormones, postmenopausal/past hormones, postmenopausal/current hormones, postmenopausal/past/ unknown current), a family history of breast cancer (Yes/No), a history of benign breast disease (Yes/No), NHS cohort (NHSI, NHSII), alcohol use (none, >0-<5, ≥5 g/day), and parity and age at first child's birth (nulliparous, parous with age at first birth <25, parous with age at first birth ≥25)

[b] Adjusted for age (continuous), BMI (continuous), age at menarche (<12, 12, 13, >13), a family history of breast cancer (Yes/No), a history of benign breast disease (Yes/No), NHS cohort (NHSI, NHSII), alcohol use (none, >0-<5, ≥5 g/day), and parity and age at first child's birth (nulliparous, parous with age at first birth <25, parous with age at first birth ≥25)

[c] Adjusted for age (continuous), BMI (continuous), , age at menarche (<12, 12, 13, >13), a family history of breast cancer (Yes/No), a history of benign breast disease (Yes/No), NHS cohort (NHSI, NHSII), alcohol use (none, >0-<5, ≥5 g/day), hormone therapy (none, past, current, past/unknown current), age at menopause (<46, 46-<50, 50-<55, ≥55, unknown), and parity and age at first child's birth (nulliparous, parous with age at first birth <25, parous with age at first birth ≥25)

Supplemental table 2. Associations of aspirin and other NSAIDs with non-dense area of the breast, by menopausal status

Intake category	All women		Premenopausal		Postmenopausal	
	N	Full Models, β and 95% CI[a]	N	Full Models, β and 95% CI[b]	N	Full Models, β and 95% CI[c]
ASPIRIN USE						
Regular use (≥2 times/week)						
Non-users	1348	Reference	867	Reference	481	Reference
Past users	965	-0.16 (-0.35, 0.03)	363	-0.21 (-0.45, 0.04)	602	-0.05 (-0.33, 0.23)
Current users						
<5 yrs	339	-0.27 (-0.52, -0.01)	177	-0.38 (-0.69, -0.07)	162	-0.03 (-0.44, 0.37)
≥5 yrs	1023	-0.02 (-0.21, 0.18)	286	-0.01 (-0.30, 0.28)	737	0.09 (-0.19, 0.38)
p-trend		0.81		0.34		0.38
Frequency of use						
Non-users	1343	Reference	862	Reference	481	Reference
Past users	1072	-0.20 (-0.38, -0.01)	389	-0.26 (-0.51, -0.02)	683	-0.07 (-0.34, 0.21)
Current users						
1 day/wk	632	-0.18 (-0.40, 0.04)	264	-0.29 (-0.58, 0.01)	368	0.03 (-0.29, 0.36)
2-3 days/wk	310	0.02 (-0.25, 0.30)	114	-0.07 (-0.46, 0.31)	196	0.19 (-0.20, 0.57)
4-5 days/wk	142	0.09 (-0.28, 0.47)	37	0.07 (-0.57, 0.71)	105	0.20 (-0.29, 0.68)
6+ days/wk	457	-0.14 (-0.39, 0.10)	107	-0.11 (-0.50, 0.29)	350	-0.05 (-0.37, 0.28)
p-trend		0.98		0.89		0.87
Dosage (number of tablets per week)						
Non-users	759	Reference	390	Reference	369	Reference
Past users						
<2	410	-0.10 (-0.40, 0.19)	108	-0.11 (-0.62, 0.41)	302	-0.04 (-0.41, 0.32)
2-5	124	-0.40 (-0.84, 0.05)	24	-0.04 (-0.95, 0.86)	100	-0.43 (-0.94, 0.09)
>5	87	0.49 (-0.02, 1.01)	13	0.84 (-0.36, 2.04)	74	0.46 (-0.12, 1.04)
p-trend		0.04		0.13		0.18
Current users						
<2	450	-0.20 (-0.48, 0.08)	154	-0.51 (-0.95, -0.07)	296	0.05 (-0.31, 0.41)
2-5	332	-0.09 (-0.41, 0.22)	65	0.37 (-0.23, 0.96)	267	-0.13 (-0.50, 0.25)
>5	379	0.12 (-0.17, 0.41)	100	-0.12 (-0.61, 0.38)	279	0.29 (-0.07, 0.66)
p-trend		0.14		0.58		0.12

Intake category	All women		Premenopausal		Postmenopausal	
	N	Full Models, β and 95% CI[a]	N	Full Models, β and 95% CI[b]	N	Full Models, β and 95% CI[c]
Duration (years of use by status)						
Non-users	1348	Reference	867	Reference	481	Reference
Past users						
<2	36	0.00 (-0.70, 0.70)	17	-0.28 (-1.20, 0.63)	19	0.29 (-0.75, 1.32)
2-5	433	-0.35 (-0.58, -0.12)	215	-0.35 (-0.63, -0.06)	218	-0.24 (-0.60, 0.12)
>5	496	0.02 (-0.22, 0.26)	131	0.06 (-0.32, 0.44)	365	0.06 (-0.27, 0.39)
p-trend		0.57		0.74		0.40
Current users						
<2	142	-0.04 (-0.41, 0.32)	81	-0.24 (-0.68, 0.19)	61	0.32 (-0.28, 0.92)
2-5	253	-0.25 (-0.53, 0.04)	126	-0.33 (-0.69, 0.03)	127	-0.03 (-0.48, 0.41)
>5	967	-0.02 (-0.22, 0.19)	256	-0.01 (-0.31, 0.29)	711	0.07 (-0.21, 0.36)
p-trend		0.72		0.69		0.72
NSAIDs						
Regular use (≥2 times/week)						
Non-users	1310	Reference	479	Reference	831	Reference
Past users	680	0.05 (-0.15, 0.26)	367	0.09 (-0.18, 0.35)	313	0.04 (-0.27, 0.34)
Current users						
<5 yrs	877	-0.02 (-0.20, 0.16)	436	-0.01 (-0.25, 0.23)	441	0.01 (-0.25, 0.28)
≥5 yrs	599	0.06 (-0.16, 0.28)	313	0.22 (-0.06, 0.50)	286	-0.06 (-0.40, 0.27)
p-trend		0.83		0.28		0.80
Frequency of use						
Non-users	1301	Reference	471	Reference	830	Reference
Past users	678	0.03 (-0.17, 0.24)	365	0.06 (-0.21, 0.33)	313	0.03 (-0.28, 0.34)
Current users						
1 day/wk	566	-0.04 (-0.25, 0.17)	337	0.00 (-0.26, 0.26)	229	-0.00 (-0.34, 0.33)
2-3 days/wk	429	0.02 (-0.21, 0.26)	255	0.04 (-0.25, 0.33)	174	0.08 (-0.29, 0.46)
4-5 days/wk	131	-0.17 (-0.55, 0.21)	59	0.23 (-0.28, 0.74)	72	-0.52 (-1.06, 0.03)
6+ days/wk	274	0.13 (-0.15, 0.40)	74	0.37 (-0.10, 0.83)	200	0.06 (-0.29, 0.41)
p-trend		0.75		0.22		0.86

Intake category	All women		Premenopausal		Postmenopausal	
	N	Full Models, β and 95% CI[a]	N	Full Models, β and 95% CI[b]	N	Full Models, β and 95% CI[c]
ANY NSAIDs USE						
Regular use (≥2 times/week)						
Non-users	602	Reference	287	Reference	315	Reference
Past users	892	-0.03 (-0.25, 0.19)	432	0.01 (-0.28, 0.30)	460	-0.07 (-0.39, 0.26)
Current users						
<5 yrs	895	-0.02 (-0.24, 0.20)	466	-0.08 (-0.37, 0.20)	429	0.09 (-0.24, 0.42)
≥5 yrs	1528	0.03 (-0.17, 0.23)	569	0.09 (-0.18, 0.37)	959	0.04 (-0.24, 0.33)
p-trend		0.58		0.56		0.52

Abbreviations: CI- confidence interval; NSAIDs-non-steroid anti-inflammatory drugs

[a] Adjusted for age (continuous), BMI (continuous), age at menarche (<12, 12, 13, >13), menopausal status/postmenopausal hormone use (premenopausal, postmenopausal/no hormones, postmenopausal/past hormones, postmenopausal/current hormones, postmenopausal/past/ unknown current), a family history of breast cancer (Yes/No), a history of benign breast disease (Yes/No), NHS cohort (NHSI, NHSII), alcohol use (none, >0-<5, ≥5 g/day), and parity and age at first child's birth (nulliparous, parous with age at first birth <25, parous with age at first birth ≥25)
[b] Adjusted for age (continuous), BMI (continuous), age at menarche (<12, 12, 13, >13), a family history of breast cancer (Yes/No), a history of benign breast disease (Yes/No), NHS cohort (NHSI, NHSII), alcohol use (none, >0-<5, ≥5 g/day), and parity and age at first child's birth (nulliparous, parous with age at first birth <25, parous with age at first birth ≥25)
[c] Adjusted for age (continuous), BMI (continuous), , age at menarche (<12, 12, 13, >13), a family history of breast cancer (Yes/No), a history of benign breast disease (Yes/No), NHS cohort (NHSI, NHSII), alcohol use (none, >0-<5, ≥5 g/day), hormone therapy (none, past, current, past/unknown current), age at menopause (<46, 46-<50, 50-<55, ≥55, unknown), and parity and age at first child's birth (nulliparous, parous with age at first birth <25, parous with age at first birth ≥25)