S2 Table: List of SNPs from genes included in the study.

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| --- | --- | --- | --- | --- |
| **Number** | **Gene Name** | **SNP ID** | **Association or interaction with colorectal adenoma, carcinoma and NSAID use** | **Study Reference** |
| **1** | *ALOX15* | rs2619112 | Interaction with NSAID use and rectal cancer (*P*=0.01) | [1] |
| **2** | *CES2* | rs140461033 | Metabolize aspirin in small intestine. No association or interaction test conducted to date. SNPs selected based on their presence on the Illumina platforms. | [2] |
| rs44410046 |
| rs201103548 |
| rs28382815 |
| rs148026549 |
| rs145407778 |
| rs10852434 |
| rs14792040 |
| rs141625476 |
| rs147070911 |
| rs150408050 |
| rs147694237 |
| **3** | *CYP2C9* | rs1057910 | rs1799853 association with CRC risk (OR= 0.92, 95% CI=0.86-0.98, *P=*0.01) and association with adenoma risk (OR= 1.39, 95% CI=1.07-1.81, *P=*0.01) | [3] |
| rs1799853 |
| **4** | *IkBkB* | rs10958713 | Association with colon cancer risk (rs10958713 OR=0.62, 95% CI=0.42-0.92, *P*=0.03; rs5029748 OR=0.72, 95% CI=0.56-0.91, *P*=0.08)Interaction with NSAID use and colon cancer risk (*P*=0.05 for rs11986055 and *P=*0.01 for rs6474387) | [4] |
| rs11986055 |
| rs5029748 |
| rs6474387 |
| **5** | *IL16* | rs12910333 | Interaction with NSAID use and colorectal cancer risk (*P*=8.2 x 10-9) | [5] |
| rs16973225 | [5] |
| **6** | *CCAT2* | rs6983267 | Association with colorectal cancer risk (OR=0.83, 95% CI= 0.74-0.94, *P*=0.004) | [6] |
| *Intergenic* 20p12 | rs961253 | Association with colorectal cancer risk (OR=1.10, 95% CI=1.04-1.17, *P=* 7.74 x 10-4) | Unpublished data from UK-CCSG group |
| **7** | *MDR1* | rs1045642 | Association with aspirin resistance (OR=2.47, 95% CI= 1.90-4.63, *P*<0.001) | [7] |
| **8** | *NCF4* | rs5995355 | Association with colorectal cancer risk (OR=2.43, 95% CI= 1.73-3.39, *P*<0.0001) | [8] |
| **9** |  *MGST1* | rs2965667 | Interaction with NSAID use and colorectal cancer risk (*P*= 4.6 x 10-9) | [5] |
| **10** | *NFkB* | rs230490 | Interaction with NSAID use and colorectal cancer risk (*P*= 0.01) | [4] |
| **11** | *ODC1* | rs11694911 | Association with colorectal adenoma recurrence risk (RR= 1.29, 95% CI=1.08-1.53, *P*= 0.005) | [9] |
| rs28362380 | Interaction with aspirin use and colorectal adenoma recurrence risk (*P=* 0.03) | [9] |
| rs2302615 | Association with colorectal adenoma recurrence risk (RR= 0.43, 95% CI=0.16-1.15) | [9, 10] |
| rs2430420 | Association with colorectal adenoma recurrence risk (RR= 1.20, 95% CI=1.03-1.40, *P*= 0.02)Interaction with aspirin use and colorectal adenoma recurrence risk (*P=* 0.05) | [9] |
| **12** | *PAFAH1B2* | rs4936367 | Metabolize aspirin in erythrocytes and plasma. No association or interaction test conducted to date. SNPs selected based on their presence on the Illumina platforms. | [11] |
| rs7112513 |
| rs142710583 |
| rs185651296 |
| rs186808413 |
| rs78428934 |
| **13** | *PTGS1* | rs3842787 | Interaction with NSAID use and rectal cancer risk (*P*=0.05 in DALS dataset and *P*=0.46 in CCFR dataset) | [12] |
| **14** | *PTGS2* | rs20417 | Association with rectal cancer risk (OR= 1.95, 95% CI= 0.89-4.26, *P*=0.05 in DALS dataset and OR= 4.88, 95% CI= 1.54-15.45, *P*=0.01 in CCFR dataset)Interaction with NSAID use and colorectal adenoma recurrence risk (*P*=0.07) | [12, 13] |
| rs5275 | Association with colon cancer risk (OR= 0.82, 95% CI=0.66-1.03, *P*= 0.20 in DALS dataset) | [12] |
| rs4648310 | Association with colorectal adenoma recurrence risk (RR=1.35, 95% CI=1.03-1.77) | [14] |
| rs2745557 | Interaction with aspirin use and rectal cancer risk (*P*=0.03 in DALS study)Interaction with aspirin use and colon cancer risk (*P*=0.001 in CCFR study) | Unpublished data from NIH-CCFR group |
| rs689469 | Association with colorectal adenoma recurrence (HR= 3.00, 95% CI=1.16-7.76, *P*= 0.02) | [15] |
| rs5277 | Association with colorectal adenoma recurrence (OR=1.49, 95% CI= 1.00-2.23) | [14] |
| **15** | *UGT1A6* | rs2070959 | Association with colorectal cancer risk (*P*=0.04)rs1105879 interaction with NSAID use and rectal cancer risk (*P*=0.02) | [16, 17] |
| rs1105879 |

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