**Supplementary Materials 2: Tables**

**Table S1**: Genotype and data information of the selected studies for meta-analysis to detect the association of *MMP-3* ‑1171 5A/6A with cancer risk

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study ID | Year | Country | Ethnicity | Cancer Type | Genotyping  Method | Control Sources | Cases | Controls | Cases | | | Controls | | | Adjusted |
| **5A/5A** | **5A/6A** | **6A/6A** | **5A/5A** | **5A/6A** | **6A/6A** | HWE  p-value |
| AbdRaboh et al | 2016 | UAE | Arab | BC | AS-PCR | HB | 59 | 77 | 22 | 30 | 7 | 22 | 47 | 8 | 0.134 |
| Biondi et al a | 2000 | Italy | Caucasian | CRC | AS-PCR | PB | 63 | 164 | 11 | 35 | 17 | 42 | 74 | 48 | 0.528 |
| Biondi et al b | 2000 | Italy | Caucasian | BC | AS-PCR | PB | 43 | 164 | 15 | 22 | 6 | 42 | 74 | 48 | 0.528 |
| Biondi et al c | 2000 | Italy | Caucasian | OVC | AS-PCR | PB | 25 | 164 | 3 | 19 | 3 | 42 | 74 | 48 | 0.528 |
| Biondi et al d | 2000 | Italy | Caucasian | LC | AS-PCR | PB | 29 | 164 | 9 | 14 | 6 | 42 | 74 | 48 | 0.528 |
| Bradbury et al | 2009 | USA | Caucasian | EC | TaqMan | PB | 313 | 455 | 85 | 169 | 59 | 105 | 232 | 118 | 0.843 |
| Brzóska et al | 2014 | Poland | Caucasian | LC | PCR-RFLP | HB | 53 | 54 | 16 | 19 | 18 | 9 | 36 | 9 | 0.129 |
| Chaudhary et al | 2010 | India | Asian | HNC | PCR-RFLP | HB | 135 | 126 | 6 | 23 | 106 | 2 | 14 | 110 | 0.295 |
| Cui et al | 2016 | China | Asian | OS | PCR-RFLP | HB | 251 | 251 | 49 | 126 | 76 | 52 | 104 | 95 | 0.134 |
| Dey et al | 2012 | India | Asian | GC | PCR-RFLP | HB | 218 | 175 | 16 | 70 | 132 | 7 | 38 | 130 | 0.295 |
| Elander et al | 2006 | Sweden | Caucasian | CRC | PCR-RFLP | PB | 127 | 208 | 37 | 52 | 38 | 48 | 115 | 45 | 0.419 |
| ElSheshtawy et al | 2017 | Egypt | Arab | HCC | PCR-RFLP | PB | 20 | 20 | 2 | 11 | 7 | 0 | 1 | 19 | 0.980 |
| Fakhoury et al | 2012 | Lebanon | Asian | LC | PCR-RFLP | PB | 41 | 51 | 26 | 15 | 0 | 20 | 24 | 7 | 0.980 |
| Fang et al | 2005 | China | Asian | LC | PCR-RFLP | HB | 243 | 350 | 7 | 73 | 163 | 8 | 105 | 237 | 0.594 |
| Ghilardi et al | 2002 | Italy | Caucasian | BC | AS-PCR | PB | 86 | 110 | 24 | 47 | 15 | 22 | 54 | 34 | 0.980 |
| González-Arriaga et al | 2012 | Spain | Caucasian | LC | PCR-RFLP | HB | 716 | 534 | 164 | 367 | 185 | 119 | 276 | 139 | 0.673 |
| Grudny et al | 2013 | Poland | Caucasian | LC | PCR-RFLP | HB | 53 | 54 | 16 | 19 | 18 | 9 | 36 | 9 | 0.129 |
| Guan et al | 2014 | China | Asian | EC | PCR-RFLP | PB | 132 | 132 | 20 | 72 | 40 | 6 | 61 | 65 | 0.295 |
| Han et al | 2008 | China | Asian | CC | AS-PCR | HB | 60 | 100 | 1 | 16 | 43 | 3 | 35 | 62 | 0.682 |
| Hashimoto et al | 2004 | Japan | Asian | HNC | PCR-RFLP | HB | 140 | 223 | 3 | 30 | 107 | 5 | 63 | 155 | 0.843 |
| Hettiaratchi et al | 2007 | Australia |  | CRC | TaqMan | PB | 503 | 471 | 125 | 224 | 154 | 116 | 235 | 120 | 0.980 |
| Hinoda et al | 2002 | Japan | Asian | CRC | PCR-RFLP | HB | 101 | 127 | 3 | 19 | 79 | 3 | 44 | 80 | 0.571 |
| Hirata et al | 2004 | Japan | Asian | RCC | PCR-RFLP | HB | 156 | 230 | 3 | 38 | 115 | 4 | 67 | 159 | 0.594 |
| Ibrahim et al | 2020 | Egypt | Arab | BC | PCR-RFLP | PB | 162 | 146 | 12 | 40 | 110 | 2 | 18 | 126 | 0.492 |
| Kader et al | 2006 | USA | Caucasian | UBC | TaqMan | HB | 555 | 556 | 134 | 285 | 136 | 136 | 277 | 143 | 0.980 |
| Krippl et al | 2004 | Austria | Caucasian | BC | TaqMan | PB | 500 | 493 | 103 | 259 | 138 | 115 | 233 | 145 | 0.554 |
| Krishnaveni et al | 2015 | India | Asian | GC | AS-PCR | HB | 208 | 226 | 16 | 160 | 32 | 12 | 196 | 18 | 0.000 |
| Lei et al a | 2002 | Sweden+Czech Republic | Caucasian | BC | AS-PCR | Mixed | 246 | 182 | 58 | 127 | 61 | 47 | 92 | 43 | 0.969 |
| Lei et al b | 2007 | Sweden | Caucasian | BC | TaqMan | PB | 954 | 946 | 203 | 478 | 273 | 206 | 478 | 262 | 0.843 |
| Li et al a | 2006 | China | Asian | OVC | PCR-RFLP | HB | 122 | 151 | 4 | 34 | 84 | 4 | 53 | 94 | 0.571 |
| Li et al b | 2014 | China | Asian | EC | PCR-RFLP | PB | 119 | 129 | 104 | 14 | 1 | 104 | 25 | 0 | 0.528 |
| Li et al c | 2015 | China | Asian | OC | PCR-RFLP | HB | 48 | 54 | 4 | 9 | 35 | 0 | 13 | 41 | 0.594 |
| Lievre et al | 2006 | France | Caucasian | CRC | AS-PCR | HB | 595 | 547 | 158 | 271 | 166 | 130 | 291 | 126 | 0.423 |
| Liutkevicius et al | 2020 | Lithuania | Caucasian | HNC | TaqMan | PB | 104 | 458 | 18 | 50 | 36 | 117 | 226 | 115 | 0.906 |
| Lu et al | 2007 | China | Asian | HNC | PCR-RFLP | HB | 221 | 366 | 5 | 71 | 145 | 8 | 109 | 249 | 0.594 |
| Mackawy et al | 2017 | Egypt | Arab | EMC | PCR-RFLP | HB | 40 | 30 | 18 | 12 | 10 | 15 | 8 | 7 | 0.134 |
| Majid et al | 2008 | Iran | Asian | BC | PCR-RFLP | PB | 120 | 60 | 28 | 62 | 30 | 8 | 38 | 14 | 0.174 |
| Motovali-Bashi et al | 2012 | Iran | Asian | CRC | PCR-RFLP | HB | 120 | 100 | 54 | 55 | 11 | 24 | 50 | 26 | 0.997 |
| Nishizawa et al | 2007 | Japan | Asian | OC | TaqMan | PB | 170 | 164 | 3 | 50 | 117 | 8 | 54 | 102 | 0.906 |
| Ohtani et al | 2009 | Japan | Asian | CRC | PCR-RFLP | PB | 119 | 67 | 3 | 27 | 89 | 0 | 17 | 50 | 0.528 |
| Okamoto et al a | 2005 | Japan | Asian | HCC | PCR-RFLP | HB | 92 | 170 | 3 | 29 | 60 | 4 | 29 | 137 | 0.406 |
| Okamoto et al b | 2010 | Japan | Asian | HCC | PCR-RFLP | HB | 92 | 86 | 3 | 29 | 60 | 4 | 27 | 55 | 0.906 |
| Padala et al | 2017 | India | Asian | BC | AS-PCR | PB | 300 | 300 | 59 | 189 | 52 | 88 | 171 | 41 | 0.044 |
| Rauf et al | 2014 | Egypt | Arab | HCC | PCR-RFLP | PB | 30 | 20 | 10 | 17 | 3 | 2 | 11 | 7 | 0.682 |
| Shams et al | 2017 | Iran | Asian | BC | PCR-RFLP | HB | 105 | 100 | 4 | 77 | 24 | 2 | 62 | 36 | 0.002 |
| Shevchenko et al | 2014 | Russia | Caucasian | BC | AS-PCR | PB | 320 | 128 | 68 | 157 | 95 | 19 | 48 | 61 | 0.295 |
| Smolarz et al | 2003 | Poland | Caucasian | OVC | AS-PCR | PB | 118 | 110 | 37 | 46 | 35 | 26 | 52 | 32 | 0.823 |
| Srivastava et al | 2013 | India | Asian | PC | PCR-RFLP | Mixed | 150 | 200 | 11 | 38 | 101 | 4 | 64 | 132 | 0.528 |
| Su et al | 2006 | USA | Caucasian | LC | TaqMan | PB | 2014 | 1323 | 485 | 1012 | 517 | 325 | 648 | 350 | 0.682 |
| Tu et al | 2006 | Taiwan | Asian | OC | AS-PCR | PB | 150 | 98 | 0 | 31 | 119 | 1 | 12 | 85 | 0.682 |
| Vairaktaris et al | 2007 | Greece | European | OC | PCR-RFLP | PB | 160 | 156 | 36 | 84 | 40 | 30 | 75 | 51 | 0.906 |
| Woo et al | 2007 | Korea | Asian | CRC | PCR-RFLP | PB | 185 | 304 | 5 | 52 | 128 | 4 | 69 | 231 | 0.843 |
| Xie et al | 2016 | China | China | CC | PCR-RFLP | HB | 230 | 230 | 56 | 116 | 58 | 50 | 101 | 79 | 0.381 |
| Xu et al | 2006 | China | Asian | CRC | PCR-RFLP | HB | 126 | 126 | 1 | 23 | 102 | 1 | 27 | 98 | 0.800 |
| Yaghoobtaheri et al | 2018 | Iran | Asian | OVC | PCR-RFLP | PB | 100 | 100 | 21 | 33 | 46 | 5 | 14 | 81 | 0.011 |
| Yi et al | 2010 | Taiwan | Asian | EMC | PCR-RFLP | HB | 118 | 229 | 4 | 35 | 79 | 6 | 51 | 172 | 0.594 |
| Zhai et al | 2007 | China | Asian | HCC | AS-PCR | HB | 432 | 479 | 8 | 64 | 360 | 3 | 77 | 399 | 0.886 |
| Zhang et al a | 2004 | China | Asian | EC | PCR-RFLP | HB | 234 | 350 | 1 | 73 | 160 | 8 | 105 | 237 | 0.594 |
| Zhang et al b | 2004 | China | Asian | GC | PCR-RFLP | HB | 183 | 350 | 5 | 42 | 136 | 8 | 105 | 237 | 0.594 |
| Zhang et al c | 2015 | China | Asian | EC | Sequencing | HB | 226 | 226 | 163 | 37 | 26 | 168 | 35 | 23 | 0.000 |
| Zhou et al (Guangdong) | 2007 | China | Asian | HNC | AS-PCR | PB | 231 | 284 | 4 | 46 | 181 | 2 | 77 | 205 | 0.295 |
| Zhou et al (Guangxi) | 2007 | China | Asian | HNC | AS-PCR | PB | 561 | 479 | 4 | 103 | 454 | 3 | 77 | 399 | 0.886 |
| Zinzindohoue et al | 2004 | China | Caucasian | HNC | AS-PCR | HB | 125 | 249 | 36 | 70 | 19 | 60 | 121 | 68 | 0.843 |
| Total |  |  |  |  |  |  | **14252** | **15176** | **2612** | **5917** | **5723** | **2487** | **6119** | **6570** |  |

**\*OVC-**Ovarian cancer; **BC-**Breast cancer; **CC-**Cervical cancer; **EMC-**Endometrial cancer; **OC-**Oral cancer; **UBC-**Bladder cancer; **LC**-Lung cancer; **HNC**-Head and neck cancer; **EC**-Esophageal cancer; **GC**-Gastric cancer; **HCC**-Hepatocellular cancer; **CRC**-Colorectal cancer; **PC**-Prostate cancer; **OS**-Osteosarcoma; **RCC**-Renal cell carcinoma; **PB**-Population-based; **HB**-Hospital-b

**Table S2.** Quality assessment of the included studies by NOS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Author | Country | Year | Selection | | | |  | Comparability | |  | Outcome | | | | Total Score |
| 1 | 2 | 3 | 4 |  | 5A | 5B |  | 6 | 7 | 8 | |
| Exposed cohort truly/somewhat representative | Nonexposed cohort drawn from the same community | Ascertainment of exposure | Outcome of interest not present at start |  | Cohorts adjusted for age | Cohorts adjusted for other important factor(s) |  | Quality of outcome assessment | Follow-up/  Observation period  Long enough for outcomes to occur | Adequacy of follow-up of cohorts | |
| AbdRaboh et al | 2016 | UAE | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | | 8 |
| Biondi et al a | 2000 | Italy | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | | 7 |
| Biondi et al b | 2000 | Italy | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | | 7 |
| Biondi et al c | 2000 | Italy | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | | 7 |
| Biondi et al d | 2000 | Italy | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Bradbury et al | 2009 | USA | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Brzóska et al | 2014 | Poland | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Chaudhary et al | 2010 | India | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Cui et al | 2016 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Dey et al | 2012 | India | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Elander et al | 2006 | Sweden | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| ElSheshtawy et al | 2017 | Egypt | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Fakhoury et al | 2012 | Lebanon | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Fang et al | 2005 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Ghilardi et al | 2002 | Italy | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| González-Arriaga et al | 2012 | Spain | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Grudny et al | 2013 | Poland | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Guan et al | 2014 | China | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Han et al | 2008 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Hashimoto et al | 2004 | Japan | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Hettiaratchi et al | 2007 | Australia | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Hinoda et al | 2002 | Japan | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Hirata et al | 2004 | Japan | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Ibrahim et al | 2020 | Egypt | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Kader et al | 2006 | USA | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Krippl et al | 2004 | Austria | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Krishnaveni et al | 2015 | India | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Lei et al a | 2002 | Sweden+Czech Republic | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Lei et al b | 2007 | Sweden | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Li et al a | 2006 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Li et al b | 2014 | China | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Li et al c | 2015 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Lievre et al | 2006 | France | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Liutkevicius et al | 2020 | Lithuania | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Lu et al | 2007 | China | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Mackawy et al | 2017 | Egypt | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Majid et al | 2008 | Iran | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Motovali-Bashi et al | 2012 | Iran | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Nishizawa et al | 2007 | Japan | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Ohtani et al | 2009 | Japan | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Okamoto et al a | 2005 | Japan | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Okamoto et al b | 2010 | Japan | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Padala et al | 2017 | India | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Rauf et al | 2014 | Egypt | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Shams et al | 2017 | Iran | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Shevchenko et al | 2014 | Russia | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Smolarz et al | 2003 | Poland | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Srivastava et al | 2013 | India | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Su et al | 2006 | USA | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Tu et al | 2006 | Taiwan | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Vairaktaris et al | 2007 | Greece | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Woo et al | 2007 | Korea | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Xie et al | 2016 | China | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Xu et al | 2006 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Yaghoobtaheri et al | 2018 | Iran | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Yi et al | 2010 | Taiwan | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Zhai et al | 2007 | China | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Zhang et al a | 2004 | China | \* | - | \* | \* |  | - | \* |  | \* | \* | - | 6 | |
| Zhang et al b | 2004 | China | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |
| Zhang et al c | 2015 | China | \* | \* | \* | \* |  | \* | \* |  | \* | \* | - | 8 | |
| Zhou et al (Guangdong) | 2007 | China | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Zhou et al (Guangxi) | 2007 | China | \* | \* | \* | \* |  | - | \* |  | \* | \* | - | 7 | |
| Zinzindohoue et al | 2004 | China | \* | - | \* | \* |  | \* | \* |  | \* | \* | - | 7 | |

NOS=Newcastle Ottawa Scale; the scale score ranges between 0-9 where “0-3” indicates low quality, “4-5” indicates moderate quality and score of ≥6 indicates high quality study