Supplementary Table 1. Descriptive characteristics of included studies.

| **Author, Year** | **Study Design (Cohort/Trial Name, if applicable)** | **Study Country** | **Study N1** | **Mean/**  **Median age** | **% Male** | **Mutation(s) Assessed** | **Mutation Assessment Method(s)** | **Survival Data?** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ades, 20151 | Retrospective observational | USA | 172 | 62 | 59.9% | KRAS | MAS-PCR |  |
| Allard, 20152 | Prospective observational | France | 1659 | 65.7 | 55.8% | KRAS, BRAF, NRAS | HRM, MAS-PCR |  |
| Alonso-Espinaco 20143 | Retrospective observational | Spain | 134 | 61.7 | 62.7% | KRAS, BRAF | S/D, MAS-PCR | Y |
| Amado, 20084 | RCT | Multicountry | 219 | 62 | 63.9% | KRAS | MAS-PCR | Y |
| Antonuzzo, 20155 | Phase IV Trial (OBELIX) | Italy | 34 | 63 | 56.4% | KRAS, BRAF | HRM, S/D |  |
| Astudillo-de la Vega, 20116 | Retrospective observational | Mexico | 807 | NR | NR | KRAS | HRM |  |
| Atreya, 20137 | Retrospective observational | USA | 62 | 57.2 | 52.4% | KRAS, BRAF, NRAS | S/D, MS |  |
| Bader, 20148 | Cross-sectional | Saudi Arabia | 30 | 55 | 57.8% | KRAS | SA |  |
| Baldus, 20109 | Retrospective observational | Germany | 100 | 65 | 56.0% | KRAS, BRAF | S/D, Pyro |  |
| Balko, 200910 | RCT technique validation | USA | 70 | NR | NR | KRAS | S/D |  |
| Berlin, 201311 | RCT | USA | 101 | 60.5 | 54.5% | KRAS | MAS-PCR | Y |
| Bibeau, 200912 | Retrospective observational | France | 64 | 60 | 67.0% | KRAS | MMA | Y |
| Bibeau, 201013 | Prospective observational | France | 560 | NR | NR | KRAS | S/D |  |
| Bokemeyer, 201114 | Retrospective analysis of RCT (OPUS) | Multicountry | 156 | 60.4 | 55.0% | KRAS, BRAF | HRM |  |
| Bruera, 201315 | Retrospective analysis of RCT | Italy | 59 | 67 | 62.7% | KRAS | MMA, S/D | Y |
| Bruera, 201416 | Retrospective observational | Italy | 37 | 69 | 59.5% | KRAS | S/D, GEM | Y |
| Bruin, 201117 | Retrospective analysis of RCT | Netherlands | 43 | 51 | 50% | KRAS, BRAF | S/D |  |
| Brulé, 201518 | Retrospective analysis of RCT (NCIC CTG CO.17) | Multicountry | 287 | 63.6 | 60.9% | KRAS, BRAF | NR | Y |
| Calero, 201519 | Retrospective observational | Spain | 90 | NR | NR | NRAS | Pyro | Y |
| Cappuzzo, 201420 | Retrospective observational | Italy | 64 | 64 | 55% | KRAS, BRAF | NR | Y |
| Cárdenas-Ramos 201421 | Retrospective observational | Mexico | 888 | NR | 60.2% | KRAS | S/D |  |
| Carneiro, 201222 | RCT | USA | 23 | 61.8 | 54.8% | KRAS, BRAF | S/D | Y |
| Carrera, 201523 | Cross-sectional | Spain | 80 | NR | NR | KRAS, NRAS | Pyro |  |
| Cejas, 200924 | Retrospective observational | Spain | 110 | NR | 70.9% | KRAS | S/D | Y |
| Chretien, 201325 | Prospective observational | France | 652 | 65.1 | 60.2% | KRAS | MMA, HRM, GEM |  |
| Ciardiello, 201426 | Retrospective observational (CAPRI-GOIM) | Italy | 182 | 62 | 55.0% | KRAS, BRAF, NRAS | NGS, S/D, MAS-PCR | Y |
| Ciardiello, 201527 | Phase IIB Trial (CONSIGN) | Italy | 686 | 62 | NR | KRAS | NR | Y |
| Conde-Herrero, 201328 | Retrospective observational | Spain | 46 | 62 | 63.0% | KRAS | NR | Y |
| Cremolini, 201529 | Retrospective observational (TRIBE) | Italy | 391 | 60 | 60.4% | KRAS, BRAF | Pyro, MS | Y |
| Cristobal, 201430 | Retrospective observational | Spain | 238 | 70 | 61.6% | KRAS | MAS-PCR |  |
| Crobach, 201531 | Retrospective observational | Netherlands | 28 | NR | 0% | KRAS | NGS, HRM, S/D |  |
| Cushman, 201532 | Retrospective analysis of RCT (CALGB 80203) | USA | 165 | 61.3 | 58.9% | KRAS | MAS-PCR |  |
| Day, 201533 | Retrospective observational | Australia | 108 | 70.5 | 40.6% | BRAF | S/D, MMA | Y |
| De Maglio, 201234 | Prospective observational | Italy | 39 | 65 | NR | KRAS, BRAF | Pyro |  |
| De Roock, 200835 | Retrospective observational (EVEREST, BOND, SALVAGE, BABEL) | Belgium | 113 | 60.7 | 61.9% | KRAS, BRAF | MAS-PCR, S/D | Y |
| De Roock, 201036 | Retrospective observational | Multicountry (Europe) | 747 | 61 | 58.1% | KRAS, BRAF, NRAS | MS, S/D, MAS-PCR | Y |
| Diaz-Rubio, 201237 | Retrospective analysis of RCT (MACRO) | Spain | 394 | 64 | 63.7% | KRAS | MAS-PCR, SA, S/D | Y |
| Di Bartolomeo, 201438 | Retrospective analysis of RCT | Italy | 23 | 77 | 56.5% | KRAS, BRAF | S/D |  |
| Di Fiore, 200739 | Prospective observational | France | 59 | NR | NR | KRAS | S/D, MMA, MAS-PCR | Y |
| Dobi, 201340 | Retrospective observational | France | 82 | 65.6 | 53.2% | KRAS | MMA | Y |
| Dono, 201241 | Retrospective observational | Italy | 213 | 77 | 56.3% | KRAS, BRAF | S/D, MAS-PCR |  |
| Dotan, 201242 | Retrospective observational | USA | 59 | 58.6 | 62.7% | KRAS | S/D |  |
| Douillard, 201043 | RCT (PRIME) | Multicountry | 550 | 61 | 60.4% | KRAS | MAS-PCR | Y |
| Douillard, 201444 | RCT (FUTURE) | Multicountry | 93 | 66 | 62.0% | KRAS | MAS-PCR | Y |
| Ducreux, 201545 | RCT (COLO-001) | France | 41 | NR | 72.0% | RAS | NR | Y |
| Elbjeirami, 201246 | Retrospective observational | Jordan | 77 | 55 | 55% | KRAS | MAS-PCR, S/D, SA |  |
| Erdamar 201147 | Retrospective observational | Turkey | 202 | 60.6 | 60.9% | KRAS, BRAF | MAS-PCR |  |
| Fadhil, 201248 | Retrospective observational | United Kingdom | 50 | NR | NR | KRAS, BRAF | HRM, S/D |  |
| Fanetti, 201349 | Retrospective observational | Italy | 55 | NR | NR | KRAS | S/D |  |
| Fanta, 201250 | Retrospective observational | USA | 120 | NR | NR | KRAS, BRAF | MAS-PCR |  |
| Feigelson, 201451 | Retrospective observational (CERGEN) | USA | 839 | 66.4 | 50.7% | KRAS | S/D | Y |
| Feng, 201652 | Retrospective observational | China | 198 | 54.6 | 67.7% | RAS, BRAF | Pyro |  |
| Fiala, 201553 | Retrospective observational (CORRECT) | Czech Republic | 358 | 63.0 | 62.0% | KRAS | S/D, MAS-PCR, SA | Y |
| Folprecht, 201054 | Phase II RCT (CELIM) | Germany, Austria | 50 | 65.1 | 64.3% | KRAS, BRAF | S/D, MAS-PCR, GEM |  |
| Fornaro, 201155 | Retrospective observational | Italy | 52 | 73 | 63.0% | KRAS, BRAF | Pyro | Y |
| Francisco, 201056 | Cross-sectional | USA | 58 | NR | NR | KRAS | Other |  |
| Freeman, 200857 | Retrospective analysis of RCT | USA | 62 | 62 | 59.7% | KRAS, BRAF | S/D | Y |
| Gajate, 201258 | Retrospective observational | Spain | 110 | 67.7 | 53.6% | KRAS | MAS-PCR | Y |
| Gao, 201159 | Retrospective observational | China | 59 | 57 | 64.4% | KRAS, BRAF | S/D | Y |
| Garawin, 201560 | Prospective observational | Multicountry (Asia) | 750 | NR | NR | KRAS, BRAF, NRAS | HRM |  |
| Garcia Foncillas, 201261 | Retrospective observational | Spain | 669 | NR | NR | KRAS | MAS-PCR, HRM |  |
| Garcia-Albeniz, 201162 | Prospective observational | Spain | 74 | 63 | 63.0% | KRAS, BRAF | S/D | Y |
| Garrido-Laguna, 201263 | Retrospective observational | USA | 238 | NR | 54.0% | KRAS, BRAF | S/D, Pyro | Y |
| Garufi, 201064 | Phase II Trial (POCHER) | Italy | 37 | 61 | 63.0% | KRAS | S/D |  |
| Ghidini, 201665 | Retrospective observational | Italy | 75 | 65.4 | 36.0% | KRAS, BRAF | S/D, MAS-PCR | Y |
| Gil Ferreira, 201466 | Retrospective observational | Brazil | 7797 | 60 | 51.9% | KRAS | S/D |  |
| Gillern, 201067 | Retrospective observational | USA | 23 | 53 | 52.0% | KRAS | Other |  |
| Goldstein, 201468 | Retrospective observational | Multicountry | 47 | 67 | 42.0% | BRAF | MAS-PCR | Y |
| Goncalves, 200869 | Retrospective observational | France | 32 | 58 | 50.0% | KRAS | S/D | Y |
| Graziano, 201070 | Retrospective observational | Italy | 134 | 65 | 54.0% | KRAS, BRAF | Pyro | Y |
| Guedes, 201371 | Retrospective observational | Portugal | 201 | NR | NR | KRAS, BRAF | HRM, S/D |  |
| Gumus, 201572 | Prospective observational (TURKRAS) | Turkey | 2458 | NR | 61.2% | KRAS | MMA |  |
| Harbison, 201373 | RCT (CRYSTAL) | Multicountry | 228 | 63.4 | 64.9% | KRAS | MAS-PCR | Y |
| Harlé, 201574 | Retrospective observational | France | 177 | 69.2 | 57.6% | KRAS, NRAS | Pyro |  |
| Hecht, 200975 | RCT (PAACE) | USA | 425 | 60.6 | 58.9% | KRAS | MAS-PCR | Y |
| Heinemann, 201476 | Phase III RCT (FIRE-3) | Germany, Austria | 592 | 64 | 69.3% | RAS | Pyro | Y |
| Heqedus, 201177 | Prospective observational | Hungary | 35 | NR | NR | KRAS | S/D | Y |
| Hikosaka, 201478 | Prospective observational | Japan | 217 | NR | NR | KRAS2 | Pyro | Y |
| Hong, 201379 | Prospective observational | South Korea | 80 | 55 | 65.0% | KRAS2 | S/D | Y |
| Hsieh, 201280 | Prospective observational | Taiwan | 112 | NR | 71.4% | KRAS2 | S/D | Y |
| Huang, 201181 | Prospective observational | Taiwan | 98 | 58 | 52.0% | KRAS2 | S/D | Y |
| Huang, 201382 | Retrospective observational | Taiwan | 205 | 61.0 | 58.5% | KRAS | S/D | Y |
| Hurtwitz, 200983 | Phase III RCT | USA | 101 | 58 | 53.5% | KRAS | S/D | Y |
| Ilie, 201484 | Retrospective observational | France | 489 | 63.5 | 68.0% | KRAS, BRAF | Pyro, S/D |  |
| Inno, 201185 | Retrospective observational | Italy | 73 | 58 | 58.9% | KRAS, BRAF | S/D | Y |
| Isella, 201386 | Prospective observational | Italy | 64 | 66.4 | 81.3% | KRAS, BRAF, NRAS | S/D, MAS-PCR |  |
| Italiano, 201087 | Retrospective observational | France | 61 | 65 | 67.0% | KRAS, BRAF | S/D, Other |  |
| Ito, 201388 | Prospective observational | Japan | 67 | 65 | 67.7% | BRAF | S/D | Y |
| Iwamoto, 201489 | Phase II RCT (FLIER) | Japan | 60 | 62 | 65.0% | BRAF | S/D |  |
| Jakovljevic, 201290 | Retrospective observational | Serbia | 190 | 60 | 63.7% | KRAS, BRAF | MAS-PCR, SA, HRM |  |
| Jeffers, 201391 | Phase III RCT (CORRECT) | Germany | 742 | NR | NR | KRAS, BRAF | Other |  |
| Kaczirek, 201592 | Retrospective analysis of RCT (CECOG/CORE 1.2.002) | Multicountry | 148 | 66 | 57.0% | RAS, BRAF, NRAS | MAS-PCR, S/D, Pyro | Y |
| Kaneko, 201493 | Prospective observational | Japan | 90 | 62.9 | 63.3% | KRAS | S/D, MAS-PCR |  |
| Karagkounis, 201394 | Prospective observational | USA | 202 | 61 | 66.0% | KRAS, BRAF | S/D | Y |
| Kemeny, 201495 | Retrospective observational | USA | 169 | 56 | 58.6% | KRAS, BRAF, NRAS | MS | Y |
| Kim, 201296 | Retrospective observational | South Korea | 143 | 59 | 53.8% | KRAS | S/D |  |
| Kim, 201297 | Retrospective observational | South Korea | 49 | NR | NR | KRAS | Pyro |  |
| Kim, 201698 | Retrospective observational | South Korea | 82 | 55.5 | 54.0% | KRAS | MAS-PCR | Y |
| Knijn, 201199 | Retrospective observational (CAIRO2) | Netherlands | 305 | 65 | 62.6% | KRAS | S/D |  |
| Ko, 2011100 | Retrospective observational | Canada | 70 | 70 | 70.0% | KRAS, BRAF | GEM, MAS-PCR |  |
| Kodaz, 2015101 | Retrospective observational | Turkey | 189 | 61 | 64.6% | KRAS | Pyro |  |
| Kohne, 2011102 | Phase II Trial | Multicountry (Europe) | 145 | 64 | 68.0% | KRAS | MAS-PCR | Y |
| Kohnoe, 2011103 | Retrospective observational | Japan | 32 | NR | NR | KRAS | S/D |  |
| Koike, 2014104 | Retrospective observational | Japan | 49 | NR | NR | KRAS | NR | Y |
| Korphaisarn, 2015105 | Retrospective observational | Thailand | 29 | 63 | 50.2% | BRAF | MAS-PCR |  |
| Kosmidou, 2014106 | Prospective observational | Greece | 26 | NR | NR | KRAS, BRAF | S/D, Pyro |  |
| Langer, 2008107 | Phase III RCT (EPIC) | USA | 300 | NR | NR | KRAS | S/D | Y |
| László, 2010108 | Retrospective observational | Hungary | 26 | NR | 56.8% | KRAS, BRAF | S/D |  |
| Lau, 2015109 | Prospective observational | Hong Kong | 67 | 62.7 | 65.7% | KRAS, NRAS | S/D |  |
| Laurent-Puig, 2009110 | Retrospective observational | France | 169 | NR | NR | KRAS, BRAF | MAS-PCR | Y |
| Li, 2010111 | Retrospective observational | China | 90 | 53 | 65.6% | KRAS | S/D | Y |
| Li, 2011112 | Retrospective observational | China | 74 | 53 | 58.1% | KRAS | MAS-PCR, MMA, S/D | Y |
| Li, 2015113 | Prospective observational | China | 87 | 63 | 65.5% | KRAS | Other | Y |
| Liao, 2010114 | Retrospective observational | China | 61 | NR | 71.0% | KRAS, BRAF | Pyro | Y |
| Licar, 2010115 | Retrospective observational | Slovenia | 268 | NR | NR | KRAS, BRAF | MAS-PCR |  |
| Lin, 2011116 | Retrospective observational | Taiwan | 42 | 57 | 45.2% | KRAS, BRAF | S/D | Y |
| Lin, 2014117 | Prospective observational | China | 154 | NR | 57.8% | KRAS | Pyro | Y |
| Liou, 2011118 | Prospective observational | Taiwan | 35 | NR | 54.5% | KRAS, BRAF | S/D | Y |
| Losi, 2007119 | Retrospective observational | Italy, Switzerland | 71 | 63.3 | 54.9% | KRAS | GEM |  |
| Loupakis, 2009120 | Prospective observational | Italy | 138 | 61 | 55.0% | KRAS, BRAF | S/D | Y |
| Loupakis, 2009121 | Retrospective observational | Italy | 88 | 62 | 59.0% | BRAF | Pyro | Y |
| Loupakis, 2015122 | Prospective observational (PROVETTA) | Italy | 200 | NR | 63.0% | KRAS | NR | Y |
| Lurje, 2009123 | Retrospective observational (IMC 0144) | USA | 130 | NR | 49.2% | KRAS | GEM, S/D | Y |
| Ma, 2012124 | Retrospective observational | China | 183 | 58 | NR | KRAS, BRAF | S/D |  |
| Ma, 2013125 | RCT | China | 44 | 56.5 | 63.0% | KRAS | S/D |  |
| Ma, 2015126 | Retrospective observational | China | 183 | 58 | 56.8% | KRAS, BRAF, NRAS | S/D | Y |
| MacEdo, 2012127 | Cross-sectional | Brazil | 63 | NR | NR | KRAS | Pyro |  |
| Maesto, 2007128 | Prospective observational | Spain | 77 | 69.6 | 52.1% | BRAF | HRM |  |
| Magge, 2013129 | Retrospective observational | USA | 70 | NR | NR | KRAS | Other | Y |
| Mariani, 2010130 | Retrospective observational | France | 38 | 62.5 | 50.0% | KRAS, BRAF | MMA, MAS-PCR, S/D |  |
| Martin, 2013131 | Retrospective observational | Greece, Switzerland, Italy, Belgium | 170 | 62 | 60.0% | KRAS2 | NR |  |
| Mekenkamp, 2012132 | Retrospective analysis of RCT (CAIRO2) | Netherlands | 34 | 58.6 | 59.0% | KRAS | S/D |  |
| Michl, 2015133 | Retrospective observational | Germany | 65 | NR | 58.5% | KRAS, BRAF | Pyro |  |
| Miglio, 2013134 | Retrospective observational | Italy | 45 | 66.4 | 62.2% | KRAS | MAS-PCR |  |
| Miranda, 2013135 | Retrospective observational | Italy | 34 | NR | NR | KRAS, BRAF | GEM |  |
| Mitchell, 2011136 | RCT | USA | 87 | 62.5 | 62.1% | KRAS | MAS-PCR | Y |
| Modest, 2011137 | Retrospective observational (FIRE-3; AIO KRK-0104) | Germany | 273 | 64 | 68.3% | KRAS | Pyro |  |
| Modest, 2012138 | Retrospective analysis of RCT (AIO KRK-0104) | Germany | 146 | 63 | 71.9% | KRAS, BRAF | Pyro | Y |
| Moehler, 2015139 | Retrospective observational | Germany | 71 | 63 | 70.0% | KRAS | HRM |  |
| Molinari, 2009140 | Prospective observational | Switzerland | 37 | 67 | 63.0% | KRAS, BRAF | S/D |  |
| Molinari, 2011141 | Retrospective observational | Italy, Switzerland | 111 | NR | 59.0% | KRAS, BRAF | S/D, MS, MAS-PCR |  |
| Montomoli, 2012142 | Retrospective observational | Denmark | 106 | 61 | 64.0% | KRAS | MAS-PCR | Y |
| Moosmann, 2011143 | RCT (AIO KRK-0104) | Germany | 73 | 63 | 70.8% | KRAS | Pyro | Y |
| Morris, 2014144 | Retrospective observational | USA | 473 | 54.6 | 57.0% | KRAS, BRAF, NRAS | NGS | Y |
| Mostert, 2013145 | Prospective observational | Netherlands | 43 | 65 | 65.0% | KRAS, BRAF | S/D, MAS-PCR |  |
| Murata, 2013146 | Prospective observational | Japan | 32 | NR | 61.9% | KRAS, BRAF | Pyro |  |
| Muro, 2009147 | Phase II Trial | Japan | 24 | 59 | 65.0% | KRAS | MAS-PCR | Y |
| Nash, 2010148 | Retrospective observational | USA | 188 | 63 | 61.7% | KRAS | GEM |  |
| Nash, 2010149 | Retrospective observational | USA | 147 | 67 | 51.3% | KRAS | GEM |  |
| NCT00835185150 | Phase II Trial | Belgium, Spain | 25 | 63.3 | 56.8% | KRAS | NR |  |
| Netter, 2015151 | Retrospective observational | France | 67 | 62.4 | 51.0% | KRAS, BRAF | MAS-PCR | Y |
| Neumann, 2009152 | Prospective observational | Germany | 1018 | 63.8 | 62.4% | KRAS | S/D, Pyro |  |
| Neumann, 2013153 | Retrospective observational | Germany | 97 | NR | NR | KRAS, BRAF | Pyro |  |
| Ng, 2013154 | Phase II RCT | USA | 160 | 61.3 | 52.3% | KRAS, BRAF | S/D | Y |
| Ocvirk, 2010155 | Phase II RCT (CECOG/CORE 1.2.001) | Multicountry | 117 | 62.8 | 58.3% | KRAS | MAS-PCR | Y |
| Oliveria, 2007156 | Cross-sectional | Portugal, France, Spain | 40 | NR | NR | KRAS, BRAF | GEM, S/D |  |
| Ortiz, 2015157 | Prospective observational | Spain | 324 | NR | NR | KRAS, BRAF, NRAS | MS |  |
| Osumi, 2015158 | Retrospective observational | Japan | 98 | 64.5 | 54.1% | KRAS | MMA, S/D | Y |
| Osumi, 2016159 | Prospective observational | Japan | 132 | 63 | 53.0% | RAS, KRAS, BRAF, NRAS | MMA | Y |
| Paez 2010160 | Prospective observational | Spain | 104 | 64 | 64.0% | KRAS | S/D | Y |
| Pai, 2012161 | Retrospective observational | USA | 34 | NR | 53.0% | KRAS, BRAF | MAS-PCR, S/D, HRM |  |
| Paliogiannis, 2014162 | Prospective observational | Italy | 729 | NR | 61.0% | KRAS | S/D |  |
| Palmirotta, 2012163 | Prospective observational | Italy | 230 | 66.2 | 59.6% | KRAS | S/D |  |
| Park, 2011164 | Prospective observational | South Korea | 69 | 54 | 62.7% | KRAS, BRAF | S/D | Y |
| Peeters, 2009165 | RCT | Multicountry | 363 | 62 | 63.0% | KRAS | MAS-PCR |  |
| Peeters, 2010166 | RCT | Multicountry | 542 | 64 | 62.6% | KRAS | MAS-PCR | Y |
| Peeters, 2013167 | Retrospective analysis of RCT | Multicountry | 1096 | NR | NR | KRAS | MAS-PCR |  |
| Peeters, 2014168 | RCT | Multicountry | 542 | 64 | 62.5% | KRAS | MAS-PCR | Y |
| Pekin, 2013169 | Retrospective observational | France | 95 | 62 | 56.8% | KRAS | MMA |  |
| Pereira, 2014170 | Retrospective observational | USA | 494 | 56 | 59.0% | KRAS | S/D, MS | Y |
| Perez-Ruiz, 2012171 | Retrospective observational | Spain | 120 | 65 | 61.7% | KRAS | MAS-PCR, SA | Y |
| Perrone, 2009172 | Retrospective observational | Italy | 29 | 45 | 62.5% | KRAS, BRAF | S/D | Y |
| Phua, 2015173 | Retrospective observational | Singapore | 45 | 64.5 | 64.4% | KRAS, BRAF | S/D |  |
| Pichler, 2014174 | Retrospective observational | Austria | 80 | 60 | 67.5% | KRAS2 | Pyro | Y |
| Pietrantonio, 2014175 | Phase II Trial | Italy | 31 | 60 | 36.0% | KRAS, BRAF, NRAS | S/D |  |
| Pietrantonio, 2015176 | Retrospective observational | Italy | 74 | NR | NR | KRAS, NRAS | NGS |  |
| Pinto, 2011177 | Prospective observational | Portugal | 372 | NR | NR | KRAS | S/D, MAS-PCR, HRM, MMA |  |
| Piton, 2015178 | Prospective observational | France | 6803 | NR | NR | KRAS, NRAS | S/D, NGS, SA, HRM, MAS-PCR, MMA, Pyro, MS, Other |  |
| Price, 2011179 | Phase III RCT (MAX) | Australia | 314 | 69 | 63.0% | KRAS, BRAF | HRM, S/D | Y |
| Price, 2014180 | Phase III RCT (ASPECCT) | Multicountry | 500 | 60.5 | 64.0% | KRAS2 | MAS-PCR | Y |
| Price, 2014181 | Cross-sectional | Australia | 2877 | 75.8 | 57.7% | KRAS | NR |  |
| Price, 2016182 | Cross-sectional | Australia | 227 | 71.5 | 59.5% | KRAS, BRAF | NR | Y |
| Primrose, 2014183 | Phase III RCT | UK | 128 | 64 | 63.0% | KRAS | Pyro | Y |
| Ribeiro, 2013184 | Retrospective observational | Brazil | 65 | NR | 43.1% | KRAS | NR | Y |
| Rojo, 2012185 | Retrospective observational | Spain | 1238 | NR | NR | KRAS, BRAF | MAS-PCR |  |
| Rose, 2012186 | Retrospective observational | USA | 110 | 55.4 | 47.3% | KRAS | S/D | Y |
| Rosenthal, 2015187 | Retrospective observational | USA | 65 | 55.7 | 57.0% | KRAS | MAS-PCR | Y |
| Rossi, 2012188 | Retrospective observational | Italy | 108 | 55 | 63.0% | KRAS | S/D |  |
| Russo, 2014189 | Retrospective observational | USA | 222 | 56 | 58.0% | KRAS, BRAF, NRAS | MMA | Y |
| Ruzzo, 2012190 | Retrospective observational | Italy | 172 | NR | NR | KRAS | Pyro |  |
| Saito, 2014191 | Prospective observational | Japan | 109 | 63.5 | 57.8% | KRAS | MAS-PCR, S/D |  |
| Saltz, 2012192 | RCT | USA | 117 | 61.2 | 56.5% | KRAS | S/D | Y |
| Santini, 2008193 | Retrospective observational | Italy | 99 | 71 | 50.5% | KRAS | S/D |  |
| Saridaki, 2010194 | Prospective observational | Greece | 144 | 64 | 57.0% | BRAF | MAS-PCR | Y |
| Saridaki, 2013195 | Prospective observational | Greece | 504 | 64 | 59.0% | KRAS, BRAF | S/D, MAS-PCR | Y |
| Saridaki, 2014196 | Retrospective observational | Belgium, France | 512 | 61 | 56.8% | KRAS, BRAF | MS, S/D, MAS-PCR |  |
| Sartore-Bianchi, 2009197 | Retrospective observational | Italy, Switzerland | 110 | 64 | 64.6% | KRAS | S/D | Y |
| Sartore-Bianchi, 2009198 | Retrospective observational | Italy, Switzerland | 132 | 63.5 | 65.2% | KRAS, BRAF | S/D, MAS-PCR | Y |
| Scartozzi, 2012199 | Retrospective observational | Italy | 168 | NR | 66.0% | KRAS | S/D | Y |
| Schimanski, 2011200 | Prospective observational | Germany | 22 | NR | NR | KRAS | GEM |  |
| Schirripa, 2015201 | Prospective observational | Italy | 786 | 64 | 59.0% | KRAS, BRAF, NRAS | Pyro, S/D | Y |
| Schwartzberg, 2014202 | Phase II RCT (PEAK) | Multicountry | 112 | 61 | 67.0% | KRAS, NRAS | MAS-PCR, S/D | Y |
| Schweiger, 2014203 | Prospective observational | Austria | 39 | 64 | 51.3% | KRAS, BRAF | GEM |  |
| Sebio, 2013204 | Prospective observational | Spain | 79 | 66 | 64.0% | BRAF | MMA, MAS-PCR, NGS |  |
| Selcukbiricik, 2013205 | Retrospective observational | Turkey | 172 | 60.5 | 37.2% | KRAS, BRAF | MAS-PCR, HRM | Y |
| Shen, 2011206 | Prospective observational | China | 15 | 61 | NR | KRAS | Pyro | Y |
| Shen, 2013207 | Prospective observational | China | 55 | NR | NR | KRAS, BRAF, NRAS | S/D |  |
| Shimomura, 2013208 | Prospective observational | Japan | 64 | 62 | 65.6% | KRAS, BRAF | S/D |  |
| Shoji, 2014209 | Prospective observational | Japan | 108 | 63 | 60.2% | KRAS, BRAF | S/D |  |
| Shulman, 2012210 | Prospective observational | Israel | 333 | NR | NR | BRAF | S/D, MAS-PCR |  |
| Shulman, 2013211 | Prospective observational | Israel | 397 | NR | NR | KRAS | S/D, MAS-PCR |  |
| Siyar Ekinci, 2015212 | Retrospective observational | Turkey | 31 | 63 | 48.4% | KRAS | Pyro | Y |
| Skougaard, 2014213 | Phase II Trial | Denmark | 61 | 62 | 60.7% | KRAS | MAS-PCR |  |
| Smith, 2014214 | Prospective observational | USA | 51 | 62 | NR | KRAS, BRAF, NRAS | NGS |  |
| Smits, 2011215 | Retrospective observational | Netherlands | 734 | 67.9 | 55.6% | KRAS | S/D, GEM |  |
| Soeda, 2014216 | Phase II RCT | Japan | 43 | 67 | 62.8% | KRAS, BRAF, NRAS | S/D | Y |
| Soeda, 2014217 | Retrospective observational | Japan | 194 | 65 | 57.2% | KRAS, BRAF, NRAS | Other | Y |
| Sohal, 2015218 | Prospective observational | USA | 44 | 60 | 49.0% | KRAS | NGS |  |
| Sood, 2012219 | Prospective observational | USA | 76 | 59 | 29.0% | KRAS, BRAF | Pyro | Y |
| Sorbye, 2015220 | Prospective observational | Multicountry (Scandinavia) | 446 | 63 | 50.0% | KRAS, BRAF | Pyro | Y |
| Souglakos, 2009221 | Prospective observational | Multicountry | 168 | 59 | 52.0% | KRAS, BRAF | MS, S/D | Y |
| Spindler, 2011222 | Retrospective observational | Denmark | 94 | 62 | 54.0% | BRAF | MAS-PCR | Y |
| Spindler, 2012223 | Retrospective observational | Denmark | 98 | 62 | 56.0% | KRAS | MAS-PCR | Y |
| Spindler, 2012224 | RCT (Nordic ACT) | Denmark | 110 | NR | NR | KRAS, BRAF | MAS-PCR |  |
| Stahler, 2016225 | RCT (FIRE-1) | Germany | 108 | 63 | 66.4% | KRAS, NRAS | Pyro |  |
| Stintzing, 2012226 | RCT | Germany, Austria | 50 | 65 | 64.0% | KRAS2 | NR | Y |
| Stremitzer, 2012227 | Prospective observational | Austria | 60 | 60.3 | 60.0% | KRAS | S/D | Y |
| Suenaga, 2010228 | Prospective observational | Japan | 85 | NR | NR | KRAS | S/D |  |
| Tabernero, 2013229 | RCT (RESPECT) | Multicountry | 94 | 60.3 | 62.4% | KRAS, BRAF | MMA | Y |
| Tabernero, 2015230 | Retrospective observational (CORRECT) | Multicountry | 166 | 61 | 61.0% | KRAS | Other |  |
| Takahashi, 2014231 | Prospective observational | Japan | 103 | 62 | 68.0% | KRAS2 | NR | Y |
| Takahashi, 2014232 | Retrospective observational | Japan | 337 | NR | NR | KRAS, BRAF, NRAS | S/D | Y |
| Tejpar, 2010233 | Retrospective observational | Multicountry (Europe) | 790 | NR | NR | KRAS, BRAF, NRAS | MS | Y |
| Teng, 2012234 | Retrospective observational | Taiwan | 292 | 61 | 60.6% | KRAS, BRAF | S/D | Y |
| Teufel, 2015235 | Phase III RCT (CORRECT) | China | 143 | NR | NR | KRAS, BRAF, NRAS | Other |  |
| Tie, 2009236 | Cross-sectional | Australia | 129 | 69.5 | 49.0% | KRAS, BRAF | MAS-PCR | Y |
| Tie, 2011237 | Retrospective observational | Australia | 144 | 77.6 | 49.7% | KRAS, BRAF | S/D, MAS-PCR | Y |
| Tie, 2011238 | Retrospective observational | Australia | 161 | NR | 62.8% | KRAS, BRAF, NRAS | S/D, HRM |  |
| Tol, 2010239 | Phase III RCT (CAIRO2) | Netherlands | 518 | NR | 58.0% | KRAS, BRAF | S/D, MAS-PCR | Y |
| Tommasi, 2011240 | Retrospective observational | Italy | 75 | 64 | 58.7% | KRAS, BRAF | S/D |  |
| Tougeron, 2013241 | Prospective observational | France | 168 | 64.3 | 62.5% | KRAS2 | S/D | Y |
| Tran, 2011242 | Retrospective observational | Multicountry | 524 | 66 | 55.2% | BRAF | MAS-PCR | Y |
| Tsimberdou, 2012243 | Phase I Trial | USA | 76 | 62 | 55.3% | KRAS2 | NR | Y |
| Tural 2013244 | Retrospective observational | Turkey | 105 | NR | NR | KRAS2 | NR | Y |
| Tural, 2014245 | Retrospective observational | Turkey | 41 | 58 | 56.0% | BRAF | MAS-PCR | Y |
| Tviet, 2012246 | Phase III RCT (NORDIC-VII) | Multicountry (Scandinavia) | 155 | 61 | 55.0% | KRAS, BRAF | MAS-PCR | Y |
| Ulivi, 2012247 | Retrospective observational | Italy | 39 | 61 | 58.2% | KRAS, BRAF | S/D | Y |
| Umeda, 2013248 | Prospective observational | Japan | 100 | 60 | 55.0% | KRAS, BRAF | S/D, GEM |  |
| Unger, 2013249 | Prospective observational | Germany | 40 | 65.5 | 65.0% | KRAS | NR |  |
| Usakova, 2013250 | Retrospective observational | Slovak Republic | 56 | 55.7 | 58.6% | KRAS, BRAF | MMA |  |
| Usakova, 2013251 | Prospective observational | Slovak Republic | 21 | 59 | 47.6% | KRAS, BRAF | NR | Y |
| Vakiani, 2012252 | Retrospective observational | USA | 613 | 62 | 54.7% | KRAS, BRAF, NRAS | MMA, S/D |  |
| Van Cutsem, 2011253 | Phase III RCT | Multicountry | 533 | 63 | 59.5% | KRAS, BRAF | HRM | Y |
| Van den Broek, 2015254 | Retrospective analysis of RCT (CAIRO; CAIRO2) | Netherlands | 203 | 63 | 57.1% | NRAS | NGS |  |
| Vatandoust, 2014255 | Cross-sectional | Australia | 2862 | NR | NR | KRAS | NR |  |
| Vauthey, 2013256 | Retrospective observational | USA | 193 | NR | NR | KRAS, BRAF, NRAS | MS |  |
| Veldore, 2014257 | Retrospective observational | India | 299 | 55.9 | 65.2% | KRAS | MAS-PCR |  |
| Vermaat, 2012258 | Prospective observational | Netherlands | 21 | 60.7 | 52.4% | KRAS, BRAF, NRAS | NGS |  |
| Victoria, 2013259 | Cross-sectional | Spain | 45 | NR | NR | KRAS, BRAF | NR |  |
| Voutsina, 2013260 | Retrospective observational | Greece | 83 | NR | 51.8% | KRAS, BRAF | S/D, MAS-PCR, MMA | Y |
| Watanabe, 2011261 | Retrospective observational | Japan | 43 | 65 | 69.8% | KRAS | S/D |  |
| Weeraratne, 2011262 | Retrospective analysis of RCT | Multicountry | 1124 | NR | NR | KRAS | MAS-PCR |  |
| Weickhardt, 2012263 | Phase II RCT (DUX) | Australia | 50 | 63 | 60.0% | KRAS, BRAF | HRM | Y |
| Wong, 2011264 | Phase II RCT | USA | 29 | 56 | 53.0% | KRAS, BRAF | MAS-PCR | Y |
| Xu, 2014265 | Retrospective observational | China | 416 | 56 | 52.4% | KRAS | S/D, Other | Y |
| Yaeger, 2014266 | Prospective observational | USA | 515 | 64 | 52.0% | BRAF | S/D, MS | Y |
| Yaeger, 2015267 | Retrospective observational | USA | 1095 | 58 | 53.7% | KRAS, NRAS | S/D, MS |  |
| Yang, 2014268 | Retrospective observational | Taiwan | 95 | NR | 66.3% | KRAS | S/D | Y |
| Ye, 2012269 | Phase IV RCT | China | 57 | NR | NR | KRAS, BRAF2 | NR | Y |
| Yen, 2010270 | Retrospective observational | Taiwan | 95 | 66 | 57.9% | KRAS | S/D | Y |
| Yokota, 2011271 | Retrospective observational | Japan | 229 | 62 | 58.5% | KRAS, BRAF2 | MAS-PCR | Y |
| Zazo, 2012272 | Cross-sectional | Spain | 1238 | NR | NR | KRAS, BRAF | MAS-PCR |  |
| Zhang, 2010273 | Retrospective analysis of RCT (IMCL-0144) | Muticountry | 130 | 60 | 49.0% | KRAS | S/D, GEM | Y |
| Zimmitti, 2015274 | Prospective observational | USA | 184 | 58 | 58.0% | KRAS, NRAS | MS |  |
| Zlobec, 2010275 | Prospective observational | Switzerland | 45 | 63.2 | 62.2% | KRAS, BRAF | S/D |  |

1Number of patients with available mutation testing results

2Mutation prevalence data not available in this article

Abbreviations: GEM, Gel Electrophoresis Methods; HRM, High Resolution Melting; MAS-PCR, Mutant allele specific PCR; MMA, Multiplex Mutation Assay; MS, Mass Spectrometry; NGS, Next Generation Sequencing; NR, not reported; Pyro, Pyrosequencing; RCT, randomized controlled trial; SA, Strip Assay; S/D, Sanger/Direct Sequencing (PCR);

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