Supplementary Table S1: The list of excluded studies

|  |  |  |
| --- | --- | --- |
| Study | Biomarkers  | Reasons for exclusion |
| Marrone et al. 2019[1] | biomarkers | did not evaluate survival outcomes |
| Szasz et al. 2016[2] | biomarkers | did not evaluate survival outcomes |
| Antonowicz et al. 2016[3] | blood test | did not evaluate survival outcomes |
| Krieg et al. 2013[4] | BIRC5 | small sample size |
| Friedenson et al. 2005[5] | BRCA1, BRCA2 | did not evaluate survival outcomes |
| Xiao et al. 2014[6] | CA 19-9 | small sample size |
| Chen et al. 2012[7] | CA724 | did not evaluate survival outcomes |
| Yiming et al. 2015[8] | CD133 | small sample size |
| Wen et al. 2013[9] | CD133 | small sample size |
| Hu et al. 2017[10] | CD147 | did not evaluate survival outcomes |
| Ni et al. 2013[11] | CD166 | included less than 3 studies |
| Hu et al, 2017[12] | CD45 RO (+) Memory T Lymphocytes | included less than 3 studies |
| Zeng et al. 2015[13] | CDH1 | did not evaluate survival outcomes |
| Tu et al. 2016[14] | CDH1 | comment |
| Long et al. 2015[15] | CDH17 | did not evaluate survival outcomes |
| Xiao et al. 2014[16] | CEA | did not evaluate survival outcomes |
| Chen et al. 2016[17] | CLDN4 | small sample size |
| Pyo et al. 2016[18] | c-MET | did not evaluate survival outcomes |
| Xie et al. 2014[19] | COL6A3 | did not evaluate survival outcomes |
| Warschkow et al. 2012[20] | CRP | did not evaluate survival outcomes |
| Arigami et al. 2017[21] | CTC | included less than 3 studies |
| Gao et al. 2013[22] | CTC | retracted article |
| Verbeke et al. 2012[23] | CXC | review |
| Han et al.2014[24] | CXCR4 | retracted article |
| Jiang et al. 2014[25] | DKK1 | review |
| Wang et al. 2015[26] | endostatin | did not evaluate survival outcomes |
| Ma et al. 2017[27] | DNMT1 | included less than 3 studies |
| Dai et al. 2017[28] | EpCAM | included less than 3 studies |
| Shen et al. 2014[29] | EphA2 | included less than 3 studies |
| Wei et al. 2014[30] | ERCC1 | small sample size |
| Wang et al. 2016[31] | EZH2 | did not evaluate survival outcomes |
| Wang et al. 2015[32] | EZH2 | small sample size |
| Liang et al. 2017[33] | Ezrin | included less than 3 studies |
| Wu et al. 2007[34] | FasL | did not find the article |
| Cao et al 2016[35] | Fbxw7 | did not evaluate survival outcomes |
| Li et al. 2017[36] | FOXM1 | small sample size |
| Liu et al. 2019[37] | GDF15 | did not evaluate survival outcomes |
| Wu et al. 2004[38] | Ghrelin | did not evaluate survival outcomes |
| Chen et al. 2017[39] | GLUT1, GLUT3 | included less than 3 studies |
| Bartley et al. 2017[40] | HER2 | did not evaluate survival outcomes |
| Wang et al. 2017[41] | HER2 | erratum |
| Creemers et al. 2017[42] | HER2 | did not evaluate survival outcomes |
| Pyo et al. 2016[43] | HER2 | did not evaluate survival outcomes |
| Zhang et al. 2015[44] | HER2 | did not evaluate survival outcomes |
| Peng et al. 2015[45] | HER2 | did not evaluate survival outcomes |
| Ye et al. 2015[46] | HER2 | small sample size |
| Liang et al. 2014[47] | HER2 | small sample size |
| Chua et al. 2012[48] | HER2 | did not evaluate survival outcomes |
| Wang et al. 2015[49] | HER2 | small sample size |
| Cao et al. 2017[50] | HER2, HER3 | included less than 3 studies |
| Ocana et al. 2013[51] | HER3 | included less than 3 studies |
| Wang et al. 2015[52] | HER3 | small sample size |
| DiVita et al. 2015[53] | HIPEC | review |
| Liu et al. 2016[54] | Hexokinase-2 | did not evaluate survival outcomes |
| Liu et al. 2016[55] | HOTAIR | did not find the article |
| Zhao et al. 2014[56] | HP CagA antibody | did not evaluate survival outcomes |
| Shiota et al. 2014[57] | HP CagA antibody | review |
| Shiota et al. 2010[58] | HP CagA antibody | did not evaluate survival outcomes |
| Azuma et al. 2004[59] | HP CagA antibody | comment |
| Huang et al.2003[60] | HP CagA antibody | did not evaluate survival outcomes |
| Ge et al. 2017[61] | HSP27 | did not evaluate survival outcomes |
| Zheng et al. 2016[62] | HIF-2α | included less than 3 studies |
| Lin et al. 2014[63] | HIF-2α | small sample size |
| Zhu et al. 2013[64] | HIF-2α | small sample size |
| Altobelli et al. 2015[65] | HtrA1 | review |
| Leake et al. 2012[66] | IFCCs | did not evaluate survival outcomes |
| Shu et al. 2015[67] | IL-6 | did not evaluate survival outcomes |
| Heatley et al. 2008[68] | Immunohistochemical biomarkers | did not evaluate survival outcomes |
| Chen et al. 2017[69] | IMP3 | included less than 3 studies |
| Pyo et al. 2017[70] | Ki-67 | small sample size |
| Wang et al. 2014[71] | LBC | did not evaluate survival outcomes |
| Chen et al. 2016[72] | LMP1 | included less than 3 studies |
| Barchitta et al. 2014[73] | Line-1 | did not evaluate survival outcomes |
| Hathurusinghe et al. 2007[74] | M2-PK | did not evaluate survival outcomes |
| Kumar et al. 2007[75] | M2-pyruvate kinase | did not evaluate survival outcomes |
| Gumulec et al. 2014[76] | Metallothionein | included less than 3 studies |
| Wang et al. 2014[77] | miRNA | did not evaluate survival outcomes |
| Wang et al. 2014[78] | MMP2 | small sample size |
| Wang et al. 2014[78] | MMP2 | small sample size |
| Long et al. 2014[79] | MMP7 | did not evaluate survival outcomes |
| Chen et al. 2014[80] | MMP9 | did not find the article |
| Sampieri et al. 2013[81] | MMPs | review |
| Tu et al. 2016[82] | MT1-MMP | letter to editor |
| Pyo et al. 2015[83] | MUC2 | did not evaluate survival outcomes |
| Yildirim et al. 2015[84] | MUC5AC | small sample size |
| Chau et al. 2004[85] | Multivariate prognostic factor | research article |
| Roli et al. 2017[86] | NGAL | included less than 3 studies |
| Hu et al. 2015[87] | NLR | review |
| Chen et al. 2015[88] | NLR | small sample size |
| Zhang et al. 2014[89] | NLR | small sample size |
| Paramanathan et al. 2014[90] | NLR | small sample size |
| Du et al. 2014[91] | Notch | review |
| Wang et al. 2014[92] | P16 | did not evaluate survival outcomes |
| Zhang et al. 2014[93] | P53 antibody | did not evaluate survival outcomes |
| Xu et al. 2014[94] | P53 | did not evaluate survival outcomes |
| Zhang et al. 2016[95] | PD-L1 | small sample size |
| Liu et al. 2016[96] | PD-L1 | small sample size |
| Xu et al. 2015[97] | PD-L1 | small sample size |
| Chong et al. 2013[98] | PI3K | research article |
| Cui et al. 2014[99] | PLCE1 | did not evaluate survival outcomes |
| Gu et al. 2016[100] | PLR | small sample size |
| Zhou et al. 2014[101] | PLR | small sample size |
| Cao et al 2016[102] | p-mTOR | review |
| Yu et al. 2016[103] | pSTAT3 | small sample size |
| Sakamoto et al. 1996[104] | preoperative immunosuppressive acidic protein | research article |
| Huang et al. 2015[105] | Serum Pepsinogens | did not evaluate survival outcomes |
| Terasewa et al. 2014[106] | Serum Pepsinogens | did not evaluate survival outcomes |
| Miki et al. 2006[107] | Serum Pepsinogens | did not evaluate survival outcomes |
| Dinis-Ribeiro et al. 2004[108] | Serum Pepsinogens | did not evaluate survival outcomes |
| Shimada et al. 2014[109] | serum tumor markers | review |
| Yu et al. 2016[110] | SIRT3 | included less than 3 studies |
| Chen et al. 2016[111] | snail protein | did not evaluate survival outcomes |
| Du et al. 2016[112] | SOX2 | small sample size |
| Chen et al. 2016[113] | SOX4 | included less than 3 studies |
| Li et al. 2016[114] | SPARC | review |
| Hu et al, 2017[115] | SPARCL1 | included less than 3 studies |
| Li et al. 2015[116] | STAT3 | did not evaluate survival outcomes |
| Liu et al. 2016[117] | TAM | did not find the article |
| Wentzensen et al. 2011[118] | telomere length | did not evaluate survival outcomes |
| Acharya et al. 2017[119] | tumor marker | did not evaluate survival outcomes |
| Li et al. 2016[120] | VacA antibody | did not evaluate survival outcomes |
| Wang et al. 2016[121] | 5-fluorouracil metabolic enzymes | small sample size |

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