|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | ***Author year*** | ***Marker*** | ***PubMed Id*** | ***staining*** | ***ND-OL*** | ***D-OPMD*** | ***True Positive*** | ***False Positive*** | ***False Negative***  | ***True Negative*** | ***ND-OL*** | ***D-OPMD*** |
| ***Mean***  | ***Std Dev***  | ***Mean***  | ***Std Dev***  |
| *1* | Abrahao 2011[1] | P53 | 21359449 | nuclear | 5 | 18 | 7 | 0 | 11 | 5 |  |  |  |  |
|  | Abrahao 2011[1] | hTERT | 21359449 | nuclear | 5 | 18 | 15 | 5 | 3 | 0 |  |  |  |  |
|  | Abrahao 2011[1] | P16 | 21359449 | nuclear, Cytoplasmic | 5 | 18 | 4 | 2 | 14 | 3 |  |  |  |  |
| *2* | Agarwal 1999[2] | P53 | 10435158 | nuclear, Cytoplasmic | 53 | 10 | 7 | 17 | 3 | 36 | 0.53 | 0.92 | 1.3 | 1.15 |
|  | Agarwal 1999[2] | MDM2 | 10435158 | nuclear, cytoplasmic | 53 | 10 | 6 | 13 | 4 | 40 | 0.46 | 0.92 | 1 | 1.05 |
| 3 | Gonçalves 2017[3] | P53 | 28941745 | nucleus | 33 | 67 | 54 | 9 | 13 | 24 |  |  |  |  |
| *4* | Bradley 2006[4] | p16 | 16799478 | nucleus, cytoplasm  | 33 | 86 | 10 | 3 | 76 | 30 |  |  |  |  |
| *5* | Mack 2008[5] | CD44s | 18852874 | cell membrane | 10 | 22 | 0 | 0 | 22 | 10 | 249.5 | 45.85 | 276.5 | 36.25 |
|  | Mack 2008[5] | CD44V6 | 18852874 | cell membrane | 10 | 22 | 0 | 0 | 22 | 10 | 198 | 35.73 | 239.6 | 53.91 |
| *6* | Buajeeb 2009[6] | p16 | 19192055 | nuclear/ cytoplasmic | 25 | 15 | 0 | 4 | 15 | 21 |  |  |  |  |
| *7* | Chandrashekhar 2015[7] | PCNA  | 26266215 | Nuclear | 10 | 10 |  |  |  |  | 160.6 | 41.73 | 229 | 49.39 |
| *8* | chen 1999[8] | P16 | 10235368 | nuclear, cytoplasm | 20 | 30 | 14 | 3 | 16 | 17 |  |  |  |  |
|  | chen 1999[8] | CDK4 | 10235368 | nuclear | 20 | 30 | 14 | 4 | 16 | 16 |  |  |  |  |
| *9* | Chiang 2000[9] | PCNA  | 10899674 | nuclear | 20 | 10 | 10 | 11 | 0 | 9 | 17.16 | 3.96 | 44.9 | 15.4 |
| *10* | Coltrera 1992[10] | PCNA  | 1384338 | nuclear | 80 | 16 | 16 | 0 | 0 | 80 |  |  |  |  |
|  | Coltrera 1992[10] | P53 | 1384338 | Nuclear | 80 | 16 | 3 | 0 | 13 | 80 |  |  |  |  |
| *11* | Cruz 1998[11] | P53 | 9664901 | nucleus | 17 | 35 | 7 | 0 | 28 | 17 |  |  |  |  |
| *12* |  D’souza 2016[12] | Podoplanin | 27153448 | cytoplasm  | 24 | 20 | 19 | 14 | 1 | 10 |  |  |  |  |
| *13* | Deepa 2017[13] | podoplanin | 29410757 | Cytoplasm  | 20 | 20 | 13 | 7 | 7 | 13 |  |  |  |  |
| 14 | De Freitas Silva, 2013[14] | Ecadherin  | 23772858 | cytoplasm  | 10 | 30 | 19 | 10 | 11 | 0 |  |  |  |  |
| *15* | Funayama 2010[15] | Podoplanin | 21613804 | cytoplasm  | 60 | 208 | 68 | 0 | 140 | 60 |  |  |  |  |
| *16* | Gadbail 2017[16] | Ki67 | 28672080 | nuclei | 56 | 115 |  |  |  |  | 12.47 | 2.34 | 34.78 | 9.74 |
| *17* | Girod 1998[17] | P53 | 9762452 | nucleus | 79 | 34 | 13 | 23 | 21 | 56 |  |  |  |  |
|  | Girod 1998[17] | MDM2 | 9762452 | nucleus | 79 | 34 | 15 | 25 | 19 | 54 |  |  |  |  |
| *18* | Huang 1994[18] | PCNA  | 7534896 | Nuclear | 46 | 98 | 89 | 36 | 9 | 10 |  |  |  |  |
| *19* | Iwasa 2009[19] | PCNA  | 7534896 | nuclear | 45 | 31 |  |  |  |  | 19.4 | 6.6 | 44.6 | 16 |
|  | Iwasa 2009[19] | P53 | 7534896 | nuclear | 45 | 31 | 13 | 9 | 18 | 36 |  |  |  |  |
| 20 | Jatindra Kaur 2013[20] | ECadherin  | 23840677 | membrane | 86 | 20 | 8 | 62 | 12 | 24 |  |  |  |  |
| *21* | Palani 2011[21] | hTERT | 21891916 | nuclear | 10 | 15 | 7 | 4 | 8 | 6 | 64.9 | 30.7 | 85.6 | 25.1 |
| *22* | Jordan 1998[22] | p27 | 9466585 | nuclear | 10 | 36 | 0 | 0 | 36 | 10 | 49.6 | 5.8 | 31.4 | 4 |
|  | Jordan 1998[22] | Ki67 | 9466585 | nuclear | 10 | 36 |  |  |  |  | 16.3 | 3.3 | 30.2 | 4.5 |
| *23* | Kawaguchi 2008[23] | podoplanin | 18202409 | cell membrane | 101 | 49 | 24 | 32 | 25 | 69 |  |  |  |  |
| *24* | Kerdpon 1997[24] | P53 | 9467348 | nucleus | 58 | 41 | 35 | 18 | 6 | 40 | 32 | 7 | 41 | 18 |
| 25 | Kodani 2001[25] | Ki67 | 11872961 | Nuclear | 12 | 69 |  |  |  |  | 9.6 | 3.464 | 24 | 11.629 |
|  | Kodani 2001[25] | P53 | 11872961 | Nuclear | 12 | 69 | 0 | 0 | 69 | 12 | 0.6 | 1.385 | 16 | 14.952 |
|  | Kodani 2001[25] | P27 | 11872961 | Nuclear | 12 | 69 | 0 | 0 | 69 | 12 | 24.4 | 6.928 | 19.8 | 12.46 |
|  | Kodani 2001[25] | P21 | 11872961 | Nuclear | 12 | 69 |  |  |  |  | 24.7 | 6.581 | 14.6 | 9.1373 |
| *26* | Kreppel, 2012[26] | Podoplanin | 22471854 | cytoplasm | 31 | 29 | 18 | 6 | 11 | 25 |  |  |  |  |
| *27* | Kurokawa 2003[27] | syndecan-1 | 12969225 | membrane | 35 | 30 | 12 | 35 | 18 | 0 |  |  |  |  |
| *28* | Lakkam 2014[28] | syndecan-1 | 24762495 | Membrane | 10 | 30 | 11 | 10 | 19 | 0 |  |  |  |  |
| *29* | Basnaker 2014[29] | CyclinD1 | 24995250 | nuclear | 19 | 13 | 10 | 8 | 3 | 11 |  |  |  |  |
| *30* | Martinez 2012[30] | CyclinD1 | 22783442 | nuclear | 34 | 11 | 6 | 4 | 5 | 30 |  |  |  |  |
|  | Martinez 2012[30] | P53 | 22783442 | nuclear | 34 | 11 | 5 | 10 | 6 | 24 |  |  |  |  |
|  | Martinez 2012[30] | MDM2 | 22783442 | nuclear | 34 | 11 | 0 | 5 | 11 | 29 |  |  |  |  |
|  | Martinez 2012[30] | Ki67 | 22783442 | nuclear | 34 | 11 | 7 | 11 | 4 | 23 |  |  |  |  |
| 31 | Pigatti 2014[31] | Ki67 | 25265990 | Nuclear | 23 | 14 | 13 | 13 | 1 | 10 |  |  |  |  |
| *32* | Poomsawat 2010[32] | CDK4 | 20618617 | Nuclear | 32 | 14 | 13 | 16 | 1 | 16 |  |  |  |  |
| *33* | Raghunathan 2016 [33] | hTERT | 27194869 | nuclear | 10 | 21 | 13 | 0 | 8 | 10 |  |  |  |  |
| *34* | Raju 2005[34] | p53 | 16334163 | nuclear | 4 | 25 | 19 | 0 | 6 | 4 |  |  |  |  |
|  | Raju 2005[34] | CyclinD1 | 16334163 | nuclear | 4 | 25 | 24 | 0 | 1 | 4 |  |  |  |  |
|  | Raju 2005[34] | Ki67 | 16334163 | nuclear | 4 | 23 | 12 | 1 | 11 | 3 |  |  |  |  |
| 35 | Ralhan 2005[35]  | P53 | 16161051 | Not mentioned | 94 | 37 | 18 | 20 | 19 | 74 |  |  |  |  |
|  | Ralhan 2005[35]  | p21 | 16161051 | Not mentioned | 94 | 37 | 26 | 36 | 11 | 58 |  |  |  |  |
|  | Ralhan 2005[35]  | p16 | 16161051 | Not mentioned | 94 | 37 | 22 | 35 | 15 | 59 |  |  |  |  |
| *36* | Rich 1999[36] | P53 | 10452165 | Nuclear | 58 | 41 | 35 | 18 | 6 | 40 |  |  |  |  |
| *37* | Saito 1999[37] | p53 | 10226946 | nuclear | 10 | 57 | 0 | 0 | 57 | 10 | 5.1 | 1.62 | 16.52 | 9.28 |
|  | Saito 1999[37] | p16 | 10226946 | nuclear | 10 | 57 |  |  |  |  | 2 | 1.62 | 4.363 | 4.153 |
|  | Saito 1999[37] | Ki67 | 10226946 | nuclear | 10 | 57 |  |  |  |  | 14.9 | 4.28 | 36.97 | 8.25 |
|  | Saito 1999[37] | p27 | 10226946 | nuclear | 10 | 57 | 0 | 0 | 57 | 10 | 53 | 4.28 | 33.73 | 9.31 |
| *38* | Viveka 2016[38] | p53 | 26838208 | nucleus | 8 | 21 | 11 | 2 | 10 | 6 |  |  |  |  |
| *39* | Varun 2012[39] | p53 | 23776093 | nucleus | 10 | 20 | 0 | 0 | 20 | 10 | 15.1 | 9 | 37.6 | 12.6 |
| *40* | Turatti 2005[40] | CyclinD1 | 16050486 | nucleus | 15 | 41 | 2 | 0 | 39 | 15 |  |  |  |  |
| *41* | Kamat 2013[41] | syndecan-1 | 24019799 | cell membrane, cytoplasm  | 35 | 45 | 33 | 35 | 12 | 0 |  |  |  |  |
| *42* | Subin 2017[42] | CD44 | 29224811 | Cell membrane  | 233 | 229 | 0 | 0 | 229 | 233 | 73.15 | 5.32 | 97.24 | 4.04 |
| *43* | Sridevi 2015[43] | Ecadherin  | 26430364 | membrane  | 20 | 10 | 6 | 14 | 4 | 6 |  |  |  |  |
| *44* | Schoelch 1999[44] | p53 | 10621856 | nuclear | 7 | 48 | 15 | 0 | 33 | 7 |  |  |  |  |
|  | Schoelch 1999[44] | CyclinD1 | 10621856 | nuclear | 7 | 48 | 8 | 1 | 40 | 6 |  |  |  |  |
|  | Schoelch 1999[44] | Ki67 | 10621856 | nuclear | 7 | 48 | 44 | 4 | 4 | 3 |  |  |  |  |
|  | Schoelch 1999[44] | p21 | 10621856 | nuclear | 7 | 48 | 46 | 6 | 2 | 1 |  |  |  |  |
|  | Schoelch 1999[44] | p27 | 10621856 | nuclear | 7 | 48 | 33 | 4 | 15 | 3 |  |  |  |  |
| *45* | Sinanoglu 2015[45] | Ki67 | 26229582 | nuclear | 19 | 11 |  |  |  |  | 36.01 | 4.14 | 39.49 | 6.94 |
| *46* | Shintani 2002[46] | CyclinD1 | 11978545 | nuclear | 20 | 42 | 2 | 0 | 40 | 20 |  |  |  |  |
|  | Shintani 2002[46] | CDK4 | 11978545 | nuclear | 20 | 42 | 12 | 0 | 30 | 20 |  |  |  |  |
|  | Shintani 2002[46] | P16 | 11978545 | nuclear | 20 | 42 | 37 | 20 | 5 | 0 |  |  |  |  |
|  | Shintani 2002[46] | P21 | 11978545 | nuclear | 20 | 42 | 24 | 20 | 18 | 0 |  |  |  |  |
|  | Shintani 2002[46] | P27 | 11978545 | nuclear | 20 | 42 | 37 | 20 | 5 | 0 |  |  |  |  |
| **S1 Table. Data extracted from articles for meta-analysis**. Data included author details, year of publication, marker, Pubmed ID and case number both in Non-Dysplastic Oral Lesions (ND-OL) and Dysplastic Oral Potentially Malignant Disorders (D-OPMD)**.** |

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