**Supplemental Information Table S1. List of unequivocal biomarker studies.**

Gene names are provided where available. Assays for which the biomarker cannot be unambiguously identified as the product of a single particular gene are indicated with an asterisk.

|  |  |  |
| --- | --- | --- |
| Proteins | Gene symbols | Reference |
|  alpha-1-antitrypsin | SERPINA1 | Yang, Feng et al. 2011 |
| IL8, MMP9, MMP10, SERPINA1, VEGFA, ANG, CA9, APOE, SDC1, and SERPINE1 | IL8 MMP9 MMP10 SERPINA1 VEGFA ANG CA9 APOE SDC1 SERPINE1 | Chen, Chang et al 2014 |
| Acidic Fibroblast growth factor | FGFA | Chopin, Caruelle et al. 1993 |
| ADAM28, SPINK5, PTP1 | ADAM28 SPINK5 PTP1 | [Tyan, Yang et al. 2011](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_63) |
| Afamin, Alpha-1-anti-trypsin, Alpha-2-HS-glycoprotein,Angiotensinogen, Apolipoprotein A-II precursor, Apolipoprotein L1, Complement C9, nter-alpha-trypsin inhibitor HC, Plasminogen, Thrombospondin-1 , Transferrin  | AFM SERPINA1 AHSG AGT APOA2 APOL1 C9 ITIH-X PLG THBS1 TF | Chen, Chen et al 2012 |
| alpha-1-antitrypsin Apoloprotein E | SERPINA1 APOE | Urquidi V, Goodison S, et al 2012 |
| Angiogenin | ANG  | Eissa, Kenawy et al. 2004  |
| Angiogenin, VEGF, Carbonic anyhdrase IX, BTA | ANG VEGF\* CA9 Complement\_factor\_H\_related\_protein\* | Urquidi V, Goodison S, et al 2012 |
| Apo-A1 | APOA1 | Li, Li et al 2011 |
| Apo-A1 | APOA1 | Li, Li et al 2013 |
| Apo-A1 | APOA1 | Li, Li et al. 2014 |
| APOA1 APOA4 Heparin cofactor II Peroxiredoxin-2 | APOA1 APOA4 SERPIND1 PRDX2 | Chen, Chen et al 2010 |
| APOA1, APOA2, APOB, APOC3, APOC2, APOE, APOA4, TIM, SAA4, ProEGF | APOA1 APOA2 APOB APOC3 APOC2 APOE APOA4 SAA4 TIM EGF | [Chen, Lin et al. 2013](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_7) |
| APOA2 | APOA2 | Chen, Chen et al. 2015 |
| Autocrine motility factor (AMF) | Autocrine\_motility\_factor\* | Guirguis, Schiffmann et al. 1988 |
| Basic fetoprotein | Basic\_fetoprotein\* | Ichikawa, Nakayama et al. 2000 |
| Basic Fetoprotein | Basic\_fetoprotein\* | Tsujii, Yonese et al. 1990 |
| BLCA-4 | BLCA-4\_(unknown) | Van Le, Miller et al. 2005 RETRACTED |
| beta human chorionic gonadotrophin | gonadotropin\* | McLoughlin, Pepera et al. 1993 |
| Beta-2 Microglobulin | B2M | Engström 1988 |
| Bikunin | AMBP | Tsui, Tang et al. 2010 |
| BLCA-4 | BLCA-4\* | Feng, Wang et al. 2011 |
| BLCA-4 | BLCA-4\* | Konety, Nguyen et al 2000 |
| BLCA-4 | BLCA-4\* | Konety, Thu-Suong et al 2000 |
| BLCA-4 | BLCA-4\* | Myers-Irvin, Landsittel et al 2005  |
| BLCA-4 | BLCA-4\* | Shiff, Veltri et al. 2006 |
| BTA | Complement\_factor\_H\_related\_protein\*  | Blumenstein, Ellis et al. 1999  |
| BTA | Complement\_factor\_H\_related protein\* | Chautard, Daver et al 2000 |
| BTA | Complement\_factor\_H\_related\_protein\* | Gutiérrez Baños , Martín García et al 1998 |
| BTA | Complement\_factor\_H\_related\_protein\* | Gutiérrez Baños , Martín García et al 1998 |
| BTA | Complement\_factor\_H\_related\_protein\* | Heicappell, Wettig et al. 1999 |
| BTA | Complement\_factor\_H\_related\_protein\* | Heicappell, Müller et al. 2000 |
| BTA | Complement\_factor\_H\_related\_protein\* | Irani,Desgrandchamps et al 1999 |
| BTA | Complement\_factor\_H\_related\_protein\* | Kirillos, McDermott et al 1997 |
| BTA | Complement\_factor\_H\_related\_protein\* | Khaled, Abdel-Salam et al 2001 |
| BTA | Complement\_factor\_H\_related\_protein\* | Nasuti, Gomella et al. 1999 |
| BTA | Complement\_factor\_H\_related\_protein\* | Raitanen, Kaasinen et al. 2001  |
| BTA | Complement\_factor\_H\_related\_protein\* | Raitanen, Hellström et al. 2001 |
| BTA | Complement\_factor\_H\_related\_protein\* | Takashi, Schenck et al. 1999 |
| BTA | Complement\_factor\_H\_related\_protein\* | Yogi, Ikeuchi et al. 1991 |
| BTA | Complement\_factor\_H\_related\_protein\* | Gomez, Rodriguez et al, 2002 |
| BTA | Complement\_factor\_H\_related\_protein\* | Quek, Chin et al. 2002 |
| BTA | Complement\_factor\_H\_related\_protein\* | Wang, Xu et al. 1999 |
| BTA | Complement\_factor\_H\_related\_protein\* | Miyanaga, Akaza et al. 1997 |
| BTA | Complement\_factor\_H\_related\_protein\* | The United Kingdom and Eire Bladder Tumour Antigen Study Group 1997 |
| BTA NMP22 |  NUMA1 Complement\_factor\_H\_related\_protein\* | Gutiérrez Baños, Rebollo Rodrigo et al. 2000 |
| BTA | Complement\_factor\_H\_related\_protein\* | Rodríguez Martínez, Escaf Barmadah et al. 2000 |
| BTA, Survivin | Complement\_factor\_H\_related\_protein\* BIRC5 | Davies, Chen et al. 2005 |
| BTA, UBC | Complement\_factor\_H\_related\_protein\* KRT8 KRT18 | Babjuk, Soukup et al. 2008 |
| BTA, Urinary Bladder cancer antigen | Complement\_factor\_H\_related\_protein\* KRT8 KRT18 | Hazzaa, Elashry et al 2010, |
| BTA, Urinary Bladder cancer antigen | Complement\_factor\_H\_related\_protein\* KRT8 KRT18 | Vlahou, Giannopoulos et al. 2004 |
| BTA, NMP22, Survivin, CD44, VEGF | NUMA1 Complement\_factor\_H\_related\_protein\* BIRC5 CD44 VEGF\* | Sun, He et al. 2006 |
| BTA | Complement\_factor\_H\_related\_protein\* | Krupski, Moskaluk et al 2000 |
| BTA | Complement\_factor\_H\_related\_protein\* | Mattioli, Seregni et al. 2000 |
| CA 19-9 | CA19-9\* | Vestergaard, Wolf et al. 1998 |
| CA19-9 | CA19-9\* | Noto, Fujime et al. 1997 |
| CA19-9 | CA19-9\* | Pal, Roy et al. 2011 |
| CA19-9 | CA19-9\* | Roy, Dasgupta et al. 2013 |
| CA19-9 | CA19-9\* | Chuang & Liao 2004 |
| CA19-9, Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Cicigoi, Rocca Rossetti et al. 1986 |
| CA19-9, Carcinoembryonic antigen (CEA), Tissue polypeptide antigen (TPA) | CA19-9\* Carcinoembryonic\_antigen\* Tissue\_polypeptide\_antigen\*  | Casetta, Piana et al. 1993 |
| CA19-9, DU-PAN-2 | CA19-9\* DUPAN2\* | Nagao, Itoh et al. 2007 |
| Calreticulin | CALR | Kageyama, Isono et al. 2004 |
| Calreticulin | CALR | Kageyama, Isono et al. 2009 |
| Calreticulin annexin A2 annexin A3 | CALR ANXA2 ANXA3 | Lu, Lin et al. 2014 |
| Calreticulin, Catechol-o-methyltransferase, γ-synuclein, BTA | CALR COMT SNCG Complement\_factor\_H\_related\_protein\* | Iwaki, kageyama et al 2004 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Colleen, Ek et al 1979 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Coombers, Hall et al. 1975 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Saied, El-Metenawy et al. 2007 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Wahren, Edsmyr et al. 1975 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Wahren & Edsmyr 1978 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Wahren, Nilsson et al. 1982 |
| Carcinoembryonic antigen  | Carcinoembryonic\_antigen\* | James, Alroy et al. 1980 |
| Carcinoembryonic antigen  | Carcinoembryonic\_antigen\* | Nilsson, Wahren et al. 1982 |
| Carcinoembryonic antigen (CEA)  | Carcinoembryonic\_antigen\* | Nevile, Nery et al 1973 |
| Carcinoembryonic antigen (CEA) /p +IgG, IgA and IgM /p  | Carcinembryonic\_antigen\* Immunoglobulins\* | Huland, Otto et al. 1983 |
| Carcinoembryonic antigen (CEA), Ferritin, Tissue polypeptide antigen (TPA) | Carcinoembryonic\_antIgen\* ferritin\* tissue\_polypeptide\_antigen\* | Halim, el-Ahmady et al. 1992 |
| Carcinoembryonic antigen FDP | Carcinoembryonic\_antigen\* FDP | Wajsman, Merrin et al. 1975 |
| Cathepsin B | CTSB | Eiján, Sandes et al 2000 |
| Cathepsin B | CTSB | [Kotaska, Dusek et al. 2012](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_28)  |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Fraser, Ravry et al. 1975 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Gadja, Tyloch et al. 1995 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Guinan, McKiel et al. 1978 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Ionescu, Romas et al. 1976 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Jakse, Rauschmeier et al. 1983 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Klippel, Axt et al. 1983 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Korsetn, Persijn et al. 1976 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Murphy, Vandevoord et al 1977 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Oshiumi, Yagi et al. 1978  |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Oshiumi, Yagi et al. 1979 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Tailly, Cornelissen et al. 1983 |
| Carcinoembryonic antigen | Carcinoembryonic\_antigen\* | Zimmerman, Wahren et al. 1980 |
| CEA & TPA | Carcinoembryonic\_antigen\* tissue\_polypeptide\_antigen\* | Stefanović, Mitić-Zlatković et al. 1999 |
| CEA, TPA and CA 19-9 | Carcinoembryonic\_antigen\* tissue\_polypeptide\_antigen\* CA19-9\* | Tizzani, Cassetta et al. 1987 |
| Chorionic Gonadotropin(CG), | gonadotropin\* | Iles, Jenkins et al. 1989  |
| Chorionic Gonadotropin(CG), | gonadotropin\* | Iles, Persad et al. 1996 |
| Chorionic Gonadotropin(CG), Chorionic Gonadotropin β-Subunit [GCβ](Core fragment as well in Urine) | gonadotropin\* | Hotakainen, Haglund et al. 2002 |
| Clusterin | CLU | Stejskal & Fiala 2006 |
| CXCL1 | CXCL1 | Kawanishi, Matsui et al. 2008 |
| Cyfra 21-1 | KRT19 | El-Ahmady, Halim et al. 1999 |
| Cyfra 21-1 | KRT19 | Nisman, Yutkin et al 2009 |
| Cyfra 21-1 | KRT19 | Senga, Kimura et al 1996 |
| Cyfra 21-1 UBC TPA NMP22 | KRT8 KRT18 KRT19 NUMA1 Tissue\_polypeptide\_antigen\* | Sánchez-Carbayo, Herrero et al. 1999 |
| CYFRA 21-1, VEGF | KRT19 VEGF\* | Bian and Xu 2007 |
| CYFRA21-1  | KRT19 | Dittadi, Barioli et al 1996 |
| CYFRA21-1  | KRT19 | Pariente, Bordenave et al 1997 |
| CYFRA21-1 FDP NMP22 UBC | KRT19 FGA&FGB NUMA1 KRT8 KRT18 | Jeong, Park et al 2012 |
| CYP1A1 | CYP1A1 | Dörrenhaus,Müller et al 2007 |
| Cystatin B | CSTB  | Feldman, Banyard et al. 2009 |
| cytokeratin | cytokeratin\* | Basta, Attallah et al. 1988 |
| Cytokeratin | cytokeratin\* | Helmy, Seddek et al. 1991 |
| D-dimer, IL-6, IL-8, sFAS, VEGF, BTA, NMP22  | FGA&FGB IL6 CXCL8 FAS VEGF\* Complement\_factor\_H\_related\_protein\* NUMA1 | Abogunrin, O’Kane et al 2012 |
| DEK | DEK | [Datta, Adelson et al. 2011](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_10) |
| E-Cadherin | CDH1  | Banks, Porter et al. 1995 |
| E-Cadherin | CDH1  | Protheroe, Banks et al 1999 |
| E-cadherin | CDH1  | Shi, Laudon et al. 2008 |
| EGFR, EpCAM | EGFR EpCAM |  [Bryan, Regan et al. 2015](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_4) |
| EpCAM | EpCAM | Bryan, Shimwell et al. 2014 |
| Epidermal growth factor (EGF) | EGF | Messing and Murphy-Brooks 1994 |
| epithelial membrane antigen, NMP52 | MUC1 NMP52 | Attallah, El-Far et al. 2015 |
| Fas | FAS | Yang, Li et al 2013 |
| FDP, NMP22, BTA | FGA&FGB NUMA1 Complement\_factor\_H\_related\_protein\* | Oeda and Manabe 2001) |
| Ferritin ,Carcinoembryonic antigen (CEA) Beta-2 Microglobulin | Ferritin\* Carcinoembryonic\_antigen\* B2M | Ohashi, Tohjoh et al. 1983  |
| Fibronectin | FN1 | Wunderlich, Reichelt et al. 2001 |
| FGB, APOE, Alpha-1-antitrypsin and LRG1 | FGB APOE LRG1 SERPINA1 | [Lindén, Lind et al. 2012](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_34) |
| Fibronectin | FN1 | Eissa, Zohny et al 2010 |
| Fibronectin | FN1 | Malmstrom, Larson et al 1993 |
| Fibronectin | FN1 | Ménendez, Fernández-Suárez et al 2005 |
| Fibronectin, CK18 | FN1 KRT18 | Sánchez-Carbayo, Urrutia et al. 2000 |
| glutathione S-transferase P1 | GSTP1 | Lafuente, Rodriguez et al. 1998 |
| Heparin-binding epidermal growth factor–like growth factor (HB-EGF) ,Epidermal growth factor (EGF) | EGF HBEGF | Keay, Zhang et al. 2001 |
| HIP/PAP | REG3A | Nitta,Konishi et al 2012 |
| Histone H2B NIF-1 | Histone\_H2B\* ZNF335 | [Frantzi, Zoidakis et al. 2013](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_17) |
| HSP60, HSP70, HSP90, Interferon-γ, Tumour necrosis factor-α, Tumour growth factor-β, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-13 | HSPD1 HSP70 HSP90AA1 IFNG TNF TGFB IL1B IL2 IL4 IL5 IL6 CXCL8 IL10 IL13 | Margel, Pevsner-Fischer et al. 2011 |
| HtrA1 | HTRA1 | [Lorenzi, Lorenzi et al. 2013](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_35) |
| ICAM1 | ICAM1 | Chow, Cheng et al. 1998 |
| ICAM1 | ICAM1 | Shi, Goya et al 1998 |
| IL-11 | IL11  | [Wu, Tao et al. 2013](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_68) |
| IL-18, IL-2, IFN-gamma, IL-12, IL-4 | IL18 IFNG IL12 IL4  | Eto, Koga et al. 2005 |
| IL-1b, | IL1B | Martins, Darlin et al. 1994 |
| IL-1b, IL- 2, IL- 6, IL- 8, IL-10, IL-12, TNF-a, and IFN-gamma | IL1B IL2 IL6 CXCL8 IL10 IL12 TNFA IFNG | Watanabe, Matsuyama et al. 2003 |
| IL-1b, IL- 2, IL- 6, IL- 8, IL-10, IL-12, TNF-a, IFN-gamma,Intercellular adhesion molecule-1 (ICAM-1) | IL1B IL2 IL6 CXCL8 IL10 IL12A TNFA IFNG ICAM1 | Jackson, Alexandroff et al. 1995 |
| IL2, IL6, IL8, TNF Alpha, CYFRA 21-1, NMP22 | IL2 IL6 CXCL8 TNFA NUMA1 KRT19  | Sanchez-Carbayo, Urrutia et al. 2001 |
| Il-6, IL-10  | IL6 IL10 | Cai, Mazzoli, et al 2012 |
| IL-6, IL-8, VEGF | IL6 CXCL8 VEGF\* | [Reid, Stevenson et al. 2012](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_49) |
| IL-8 | CXCL8 | Sheryka, Wheeler et al 2003 |
| IL-8, MMP-9 and 10, PAI-1, VEGF, ANG, CA9 APOE | IL-8 MMP9 MMP10 PAI-1 VEGF\* ANG CA9 APOE | Rosser, Ross et al. 2013 |
| IL-8, MMP9, MMP10, SDC1, CCL18, PAI-1, CD44, VEGF, ANG, CA9,A1AT,OPN, PTX3, APOE | CXCL8 MMP9 MMP10 SDC1 CCL18 SERPINE1 CD44 VEGF\* ANG CA9 SERPINA1 SPP1 PTX3 APOE | [Goodison, Chang et al. 2012](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_19) |
| IL-8, MMP9, Syndecan, BTA | CXCL8 MMP9 SDC1 Complement\_factor\_H\_related\_protein\* | [Urquidi, Chang et al. 2012](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_64) |
| IL-8, MMP9, VEGFA | CXCL8 MMP9 VEGFA | [Rosser, Dai et al. 2014](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_50) |
| Insulin-like growth factor 2 | IGF2 | Watson, Burling et al. 2009 |
| intercellular adhesion molecule-1, NMP 22, Monocyte chemoattractant protein-1. | ICAM1 NUMA1 CCL2 | Parekattil, Fisher et al. 2003 |
| Interleukin-2 | IL2 | Fleischmann, Toossi et al. 1989  |
| Keratin (CK1K10 antibody) | cytokeratin\* | Attallah, Helmi et al. 1991 |
| Laminin P1 | Laminin\* | Abou Farha, Meneheers et al. 1993 |
| Midkine, HAI-1, ULBP2 | MDK SPINT1 ULBP2 | Shimwell, Bryan et al. 2013 |
| MMP1, MMP10 | MMP1 MMP10 | [Du, Lin et al. 2014](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_11) |
| MMP2, MMP9 | MMP2 MMP9 | Gerhards, Jung et al. 2001 |
| MMP2, MMP9, Cathepsin B, UPA | MMP2 MMP9 CTSB PLAU | Sier, Casetta et al. 2000 |
| MMP2, MMP9, Fibronectin | MMP2 MMP9 FN1  | Saito, Kimoto et al. 2005 |
| MMP2, MMP9, MMP2/NGAL, MMP9/TIMP, ADAMTS | MMP2 MMP9 ADAMTS TIMP1 NGAL | [Mohammed, Seleim et al. 2013](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_41) |
| MMP2, MMP9, NGAL | MMP2 MMP9 LCN2 | Fernández, Wszolek et al 2009 |
| MMP2, MMP9, TIMP-2 | MMP2 MMP9 TIMP2  | Eissa, Ali-Labib et al. 2007 |
| MMP2, MMP9, UBC, TPS, NMP22 | MMP2 MMP9 KRT8 KRT18 NUMA1 tissue-polypeptide-specific antigen\* | Di Carlo, Terracciano et al. 2006 |
| MMP3, MMP9 | MMP3 MMP9 | [El-Sharkawi, El Sabah et al. 2014](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_14) |
| MMP7 | MMP7 | Jäger, Tschirdewahn et al. 2013  |
| MMP7 | MMP7 | Szarvas, Singer et al. 2011  |
| MMP9 | MMP9 | Eissa, Labib et al 2003 |
| MMP9 | MMP9 | Offersen, Knap et al. 2010 |
| BTA | Complement\_factor\_H\_related\_protein\* | Thomas, Leyh et al 1999 |
| MMP-9, MMP-2, ADAMTS 7, MMP-9/NGAL complex, MMP9/TIMP complex and MMP-9 dimer | MMP9 MMP2 ADAMTS7 NGAL TIMP1 | Roy, Louis et al. 2008 |
| MUC1 | MUC1 | Xiang, Zhou et al. 2005 |
| nicotinamide N-methyltransferase | NNMT | [Sartini, Muzzonigro et al. 2013](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_54) |
| NMP2, BTA | NUMA1 Complement\_factor\_H\_related\_protein\* | Abd El Gawad, Moussa et al. 2005 |
| NMP22 | NUMA1 | Arora, Sarunban et al. 2010 |
| NMP22 | NUMA1 | Atsu, Ekici et al. 2002 |
| NMP22 | NUMA1 | Akaza, Miyanaga et al. 1997a |
| NMP22 | NUMA1 | Akaza, Miyanaga et al. 1997b |
| NMP22 | NUMA1 | Casella, Huber et al 2000 |
| NMP22 | NUMA1 | Chahal, Darshane et al. 2001 |
| NMP22 | NUMA1 | Chang, Wu et al. 2004 |
| NMP22 | NUMA1 | Hutterer, Karakiewicz et al. 2008 |
| NMP22 | NUMA1 | ippe, Pandrangi et al. 1999 |
| NMP22 | NUMA1 | Kapila, Kehinde et al 2008 |
| NMP22 | NUMA1 | Kumar, Kumar et al. 2006 |
| NMP22 | NUMA1 | Kundal, Pandith et al 2010 |
| NMP22 | NUMA1 | Landman, Change et al 1998 |
| NMP22 | NUMA1 | Lahme, Bichler et al 2000 |
| NMP22 | NUMA1 | Lekili, Sener et al. 2004 |
| NMP22 | NUMA1 | Menendez, Filella et al 2000 |
| NMP22 | NUMA1 | Moonen, Kiemeney et al. 2005 |
| NMP22 | NUMA1 | O’Sullivan, Sharples et al 2012 |
| NMP22 | NUMA1 | Oge, Atsu et al. 2001 |
| nmp22 | NUMA1 | Onal, Han et al. 2015 |
| NMP22 | NUMA1 | Paoluzzi,Cuttano et al 1999 |
| NMP22 | NUMA1 | Pérez García, Escaf Barmadah et al 2000 |
| NMP22 | NUMA1 | Ponsky, Sharma et al. 2001 |
| nmp22 | NUMA1 | Raina, Pahlajani et al. 2008 |
| NMP22 | NUMA1 | Sagnak, Ersoy et al. 2011 |
| NMP22 | NUMA1 | Sánchez-Carbayo, Herrero et al 1999 |
| NMP22 | NUMA1 | Serreta, Lo Presti et al 1998 |
| NMP22 | NUMA1 | Serretta, Presti et al 1998 |
| NMP22 | NUMA1 | Shariat, Savage et al. 2011 |
| NMP22 | NUMA1 | Shariat, Zippe et al. 2005 |
| NMP22 | NUMA1 | Schlake, Crispen et al. 2012 |
| NMP22 | NUMA1 | Soloway, Briggman et al 1996 |
| NMP22 | NUMA1 | Srivastava, Arora et al. 2012 |
| NMP22 | NUMA1 | Thomas, Leyh et al 1999 |
| NMP22 | NUMA1 | Todenhöfer, Hennenlotter et al. 2014 |
| NMP22 | NUMA1 | Lotan, Elias et al. 2009 |
| NMP22 | NUMA1 | Lotan, Capitanio et al. 2009 |
| NMP22 | NUMA1 | Ueda, Kawaguchi et al. 2009 |
| NMP22 | NUMA1 | Rodríguez , Justo et al. 2008 |
| NMP22 | NUMA1 | Mansoor, Calam et al. 2008 |
| NMP22 | NUMA1 | Ihm, Kim et al. 2007 |
| NMP22 | NUMA1 | Chen, Han et al. 2007 |
| NMP22 | NUMA1 | Hautmann, Eggers et al. 2007 |
| NMP22 | NUMA1 | Fatela-Cantillo, Fernandez-Suarez et al 2007 |
| NMP22 | NUMA1 | Darenkov, Perlin et al. 2006 |
| NMP22 | NUMA1 | Xin, You et al. 2006 |
| NMP22 | NUMA1 | Kitukawa, Yamamoto et. 2006 |
| NMP22 | NUMA1 | Yokoyama, Sekigawa et al. 2004 |
| NMP22 | NUMA1 | Su, Yang et al. 2003 |
| NMP22 | NUMA1 | Perez-Garcia, Eyo et al. 2002 |
| NMP22 | NUMA1 | Miyoshi, Matsuzaki et al. 2001 |
| NMP22 | NUMA1 | Zippe, Pandrangi et al. 1999 |
| NMP22 | NUMA1 | Zippe, Pandrangi et al. 1999 |
| NMP22 | NUMA1 | Lahme, Bichler et al. 2001 |
| NMP22  | NUMA1 | Stampfer,Carpinito et al 1998 |
| NMP22 BTA | NUMA1 Complement\_factor\_H\_related\_protein\* | Casetta, Gontero et al. 2000 |
| NMP22 BTA  | NUMA1 Complement\_factor\_H\_related\_protein\* | Friedrich, Hellstern et al. 2002 |
| NMP22 BTA  | NUMA1 Complement\_factor\_H\_related\_protein\* | Friedrich, Hellstern et al. 2003 |
| NMP22, BTA, Basic Fetoprotein(BFP) | NUMA1 BFP\* Complement\_factor\_H\_related\_protein | Miyanaga, Akaza et al. 2003 |
| NMP22, cytokeratin-18 | NUMA1 KRT18 | Song, Du et al. 2009 |
| NMP22 MCM5 | NUMA1 MCM5 | Kelly, Dudderidge et al. 2012 |
| NMP22, BTA | NUMA1 Complement\_factor\_H\_related\_protein\* | Abbate, D'Introno et al. 1998 |
| NMP22, BTA | NUMA1 Complement\_factor\_H\_related\_protein\* | Miyake, Nakai et al 2014 |
| NMP22, Fibronectin | NUMA1 FN1 | Eissa, Swellam et al 2002 |
| NMP22,BTA |  NUMA1 Complement\_factor\_H\_related\_protein\* | Serretta, Pomara et al 2000 |
| NMP22,E-cadherin, cathepsin D | NUMA1 CDH1 CTSD  | [Salama, Selem et al. 2012](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_53) |
| NMP22, BTA |  NUMA1 Complement\_factor\_H\_related\_protein\* | Bhuiyan, Akhter et al. 2003 |
| NMP22, BTA |  NUMA1 Complement\_factor\_H\_related\_protein\* | Sharma, Zippe et al 1999 |
| NMP22, Urinary Bladder Cancer test(UBC) | NUMA1 KRT8 KRT18 | Kibar, Goktas et al. 2006 |
| NMP52 | NMP52\* | Attalah, Sakr et al. 2005 |
| Oncofetal fibronectin | FN1  | Alías-Melgar, Neave-Sánchez et al. 2013 |
| Orosomucoid(ORM), zinc-alpha2-glycoprotein(ZAG) | ORM1 AZGP1 | Irmak, Tilki et al. 2005 |
| PAI-1, BTA, CD44, CCL18 | SERPINE1 CD44 CCL18 Complement\_factor\_H\_related\_protein\* | Urquidi V, Kim et al 2012 |
| Plasminogen Activator Inhibitor type I (PAI-1) | SERPINE1  | Becker, Szarvas et al. 2010 |
| Prothymosin-alpha | PTMA | Tzai, Tsai et al. 2006 |
| Pro-u-PA | PLAU  | Lin , Tsui et al. 2006 |
| Psoriasin | S100A7 | Celis, Rasmussen et al. 1996 |
| sCD14 | CD14 | Jackson, Lien et al. 1997 |
| Serine/threonine-protein kinase PLK2 | PLK2 | Tan, Chen et al. 2010 |
| SH3BGRL3 | SH3BGRL3 | Chiang, Pan et al. 2015 |
| Soluble carbonic anhydrase IX (s-CAIX) | CA9 | Hyrsl, Zavada et al. 2009 |
| Soluble E-Cadherin | CDH1 | Shariat, Matsumoto et al. 2005 |
| Soluble intercellular adhesion molecule-1 | ICAM1 | Aboughalia 2006 |
| Soluble Met (sMet) | MET | [McNeil, Sorbellini et al. 2014](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_37) |
| survivin | BIRC5 | Abd El-Halim, El-Shafie et al. 2014 |
| Survivin | BIRC5  | Hausladen, Wheeler et al. 2003 |
| Survivin | BIRC5 | Li, Wang et al 2013 |
| Survivin | BIRC5 | Srivastava, Singh et al. 2013 |
| Survivin | BIRC5 | Sharp, Hausladen et al. 2002 |
| Survivin, NMP22 | BIRC5 NUMA1  | Shariat, Casella et al. 2004 |
| Survivin, CYFRA 21-1 | BIRC5 KRT19 | Ohsawa, Nishimura et al. 2004 |
| Syndecan-1 | SDC1 | [Miyake, Lawton et al. 2014](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_39) |
| TACSTD2 | TACSTD2 | Chen, Lai et al 2012 |
| Tenascin C( B and C domains) | TNC | Richter, Tost et al. 2009  |
| Tenascin-C | TNC | [Gecks, Junker et al. 2011](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_18) |
| Tenascin-C | TNC | Guan, Zeng et al. 2014 |
| TGFα, VEGF | TGFA VEGFA  | Hameed and el-Metwally 2008 |
| Thromboxane receptor | TBXA2R | [Moussa et al. 2011](file:///C%3A%5CUsers%5Cwarddg%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.MSO%5CDA9885E2.xlsx#RANGE!_ENREF_42) |
| TIMP-2 survivin | TIMP2 BIRC5 | Eissa, Shabayek et al. 2010 |
| Tissue factor | F3 | Lwaleed, Francis et al. 2000 |
| Tissue Polypeptide Antigen | Tissue\_polypeptide\_antigen\* | Costello and Kumar 1985 |
| Tissue polypeptide antigen (TPA) | Tissue\_polypeptide\_antigen\* | Carbin, Ekman et al. 1989 |
| Tissue polypeptide antigen (TPA) | Tissue\_polypeptide\_antigen\* | Mack, Scheiber et al. 1987 |
| Tissue polypeptide antigen (TPA)  | Tissue\_polypeptide\_antigen\* | Kumar, Costello et al. 1981 |
| Tissue polypeptide antigen (TPA), HER-2/neu(EGF), Urokinase-type Plasminogen Activator Receptor (uPAR) ,TP53 Mutation | Tissue\_polypeptide\_antigen\* EGF PLAUR | Ecke, Schlechte et al. 2005 |
| tissue polypetide specific antigen | tissue-polypeptide-specific antigen\* | Boman, Hedelin et al. 2001 |
| tissue-polypeptide-specific antigen (TPS) | tissue-polypeptide-specific antigen\* | Sánchez-Carbayo, Urrutia, et al 2000 |
| tissue-polypeptide-specific antigen (TPS) | tissue-polypeptide-specific antigen\* | Yao, Chang et al. 1995 |
| UBC | KRT8 KRT18 | Hedelin, Jonsson et al. 2006 |
| UBC | KRT8 KRT18 | Heicappell, Schostak et al. 2000 |
| UBC | KRT8 KRT18 | Sánchez-Carbayo, Herrero et al 1999 |
| UBC | KRT8 KRT18 | Gacci, Serni et al. 2006 |
| UBC CYFRA 21-1 NMP22 | KRT8 KRT18 KRT19 NUMA1 | Sánchez-Carbayo, Urrutia et al. 2001 |
| Urinary bladder carcinoma antigen (UBC), Urine tumor-associated trypsin inhibitor(TATI), CYFRA 21-1 | KRT8 KRT18 KRT19 SPINK1 | Gkialas, Papadopoulos et al 2008 |
| Urinary gonadotropin peptide (UGP) | gonadotrophin\* | El-Ahmady, Halim et al 1996 |
| Urinary sFas | FAS | Srivastava, Singh et al 2014 |
| Urinary sFas, NMP22 | FAS NUMA1 | Svatek, Herman et al. 2006 |
| Urine tumor-associated trypsin inhibitor(TATI), NMP22 | SPINK1 NUMA1  | Shariat, Herman et al. 2005 |
| Urine tumour-associated trypsin inhibitor(TATI) | SPINK1 | Kelloniemi, Rintala et al. 2003 |
| Urokinase-type Plasminogen Activator(uPA),Urokinase-type Plasminogen Activator Receptor (uPAR)  | PLAU PLAUR | Casella, Shariat et al. 2002 |
| Urokinase-type Plasminogen Activator(uPA),Urokinase-type Plasminogen Activator Receptor (uPAR), NMP22  | PLAU PLAUR NUMA1 | Shariat, Casella et al. 2003 |
| Uroplakin | Uroplakin\* | Lai, Ye et al. 2010 |
| VEGF | VEGF\* | Crew, O’Brien et al 1999 |
| VEGF | VEGF\* | Jeon, Lee et al 2001 |
| VEGF, angiogenin | VEGF\* ANG | Urquidi, Goodison, et al 2012 |
| Vitamin D binding protein | GC | Li, Chen et al |
| Fibronectin | FN1 | Hegele, Heidenreich et al. 2003  |