Supplemental Table S5. List of included studies and records.

A. Breast

| Country | Primary Laboratory location | PDX ID | First Author Surname and Year | Associated refs | ARRIVE guidelines? |
|---|---|---|---|---|---|
| Canada | BC Cancer Agency | SA-xxx | Eirew 2015*(1)* | | no |
| France | INSERM | CRCM-xxx | Charafe-Jauffret 2013*(2)* | | no |
| | Institute Curie, Paris | HBCx-3, 21, 22, 29, 34, 36 | Cottu 2012*(3)* | Marangoni 2007*(4)*; Reyal 2012*(5)* | yes |
| | University of Montpellier | B-xxxx | du Manoir 2014*(6)* | | no |
| Germany | Max-Delbruick-Centrum fur Molekulare Medizin, Berlin | 3366 | Naundorf 1992*(7)* | | no |
| Italy | Istituto Europeo di Oncologia, Milan | T1 to T4; TA to TD. | Tosoni 2017*(8)* | | no |
| Japan | National Cancer Center Research Institute, Tokyo | WIBC-9 | Shirakawa 2001*(9)* | | no |
| | | tMK-x, tHK-x, tYK-x, tTY-x | Wakasugi 1995*(10)* | | no |
| Korea | Seoul National University College of Medicine | NR | Moon 2015*(11)* | | no |
| Norway | Oslo University Hospital | MAS98.06, MAS98.12 | Bergamaschi 2009*(12)* | | no |
| Spain | Vall d'Hebron Institute of Oncology, Barcelona | PDX-xxx | Morancho 2016*(13)* | | no |
| UK | University of Cambridge | AB-xxx; HCI-xxx; IC006; IC007; STG-xxx; VHIO-xxx | Bruna 2016*(14)* | | no |
| | Manchester Cancer Research Centre | BBxRCxxx | Eyre 2016*(15)* | | no |
| USA | Howard Hughes Medical Institute, University of Michigan | T1 to T9 | Al-Hajj 2003*(16)* | | no |
| | University of Iowa | IOWA-1T | Bogachek 2015*(17)* | | no |
| | Pfizer, Stemcentrx | BR-xx | Damelin 2015*(18)* | | no |
| | University of Utah Health Sciences Center | HCI001-004. | DeRose 2011*(19)* | Bruna 2016*(14)* | no |
| | University of Colorado Denver Anschutz | PT 12, 15, 16, 18 | Kabos 2012*(20)* | | no |
| | Department of Cancer Biology, Duarte | COH-xxxx | Kanaya 2017*(21)* | | no |
| | Washington University in St. Louis | WHIM-xx | Li 2013*(22)* | Huang 2017*(23)* | no |
| | The University of Texas MD Anderson Cancer Center, Houston | BCX-xxx | McAuliffe 2015*(24)* | | no |
| | | BCM-xxxx. | Zhang 2013*(25)* | | no |
| | Albert Einstein College of Medicine, NY | HT17, HT39 | Patsialou 2012*(26)* | | no |
| | The University of Kansas Medical Center | NR | Valdez 2011*(27)* | | no |
| | The Wistar Institute of Anatomy and Biology | HUP-1 to 3; CHTN-1 to 8; MHBC-1 to 4 | Visonneau 1998*(28)* | | no |
| | Stanford University School of Medicine | SUTI-097; 103; 110; 151; 319; 368. | Zhang 2014*(29)* | | no |

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B. Colon

| Country | Primary Laboratory location | PDX ID | First Author Surname and Year | Associated refs | ARRIVE guidelines? |
|---|---|---|---|---|---|
| China | Key laboratory of Carcinogenesis and Translational Research, Department of Surgery, Peking University Cancer Hospital and Institute | BCCxxxx | Zhang 2015*(30)* | | no |
| | Department of Colorectal Surgery, Zhejiang University, Hangzhou | 16670x 18657x, 21835x | Zhou 2011*(31)* | | no |
| | Department of Surgical Oncology, Zhejiang University | NR | Guan 2016*(32)* | | no |
| | | | Jin 2011*(33)* | | no |
| France | Laboratoire de Physiopathologie Hépatique, Centre National de la Recherche Scientifique, Université René Descartes-Paris | CT320, CT329 + others | Dangles-Marie 2007*(34)* | | no |
| | Oncodesign, Dijon | CR-IC-xxxx, CR-IGR-xxxx, CR-LRB-xxxx | Julien 2012*(35)* | | no |
| Germany | Department of General, Vascular, Thoracic and Transplantation Surgery, University of Rostock | HROC107, 108, 119, 122, 123, 125, 129, 130, 131, 135 | Gock 2016*(36)* | | no |
| | Department of General Surgery, Division of Molecular Oncology and Immunotherapy, Clinic for Surgery, Rostock | HROC 24 to 89; 183 | Linnebacher 2010*(37)* | Kuehn 2016*(38)*; Maletzki 2015*(39)* | no |
| Japan | Division of Molecular and Cellular Biology, Kobe University Graduate School of Medicine | NR | Mukohyama 2016*(40)* | | no |
| Korea | Department of Hemato-Oncology, Gil Medical Center, Gachon University | Numerical | Lee 2014*(41)* | | no |
| | Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul | NR | Oh 2015*(42)* | | no |
| Singapore | Institute of Bioengineering and Nanotechnology Singapore | FIT-CRC-086, FIT-CRC-104 | Mohamed Suhaimi 2017*(43)* | | no |
| Spain | Institute for Research in Biomedicine (IRB Barcelona) | CCR-038, CCR-010 | Gupta 2015*(44)* | | no |
| | Translational Program, Stem Cells and Cancer Laboratory; Passeig Vall d'Hebron University, Barcelona | NR | Puig 2013*(45)* | | no |
| | Vall d'Hebrón Institut d'Oncología (VHIO), Stem Cell and Cancer Laboratory, Barcelona | NR | Tenbaum 2012*(46)* | | no |
| UK | Department of Surgery, St George's Hospital Medical School, London | NR | Davies 1981*(47)* | | no |
| USA | Department of Immunology, Roswell Park Cancer Institute, NY | NR | Naka 2002*(48)* | | no |
| | Department of Surgery, University of Texas Medical Branch | NR | Chao 2017*(49)* | | no |

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|---|---|---|---|---|---|
| | Program in Immunology, Clinical Research Division, Fred Hutchinson Cancer Research Center, Seattle | D55949, D60789, D61211, D61540, WD2112, WD2713, P2822, P2827, P2842 | Chou 2013*(50)* | | no |
| | Division of Medical Oncology, Duke University, North Carolina | CRC105, CRC093, CRC066, CRC030, CRC028 | Uronis 2012*(51)* | | no |
| | Laboratory of Systems Biology, Van Andel Institute, MI | CRC02, CRC06, CRC09, CDC10, CRC12, CRC14, CRC17, CRC18, CRC19, REC02, REC09, REC12, REC16, REC19 | Burgenske 2014*(52)* | | no |
| | Department of Medicine, Division of Medical Oncology, University of Colorado Cancer Center | CRC001, 006, 007, 010, 012, 020, 021, 026, 027, 034, 035, 036, 040, 042, 052, 065. | Arcaroli 2013*(53)* | | no |
| | Oncology Discovery Research, Eli Lilly and Company, Indianapolis | CTGxxxx | Yao 2017*(54)* | | no |
| | Translational Oncology Program, University of Michigan Medical School, Ann Arbor, Michigan | UM-CRC-xx-xxxx | Ziemke 2015*(55)* | | no |
| | Department of Anesthesiology, University of Texas Medical Branch | NR | Szabo 2013*(56)* | | no |
| | The Jackson Laboratory for Genomic Medicine, CT | NR | Cho 2017*(57)* | | no |
| | Crown Bioscience, Inc., CA | CRxxxx | Chen 2015*(58)* | | no |


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*Cancer Research* **18**, 5314–5328 (2012).

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39. C. Maletzki, M. Huehns, P. Knapp, N. Waukosin, E. Klar, F. Prall, M. Linnebacher, Functional characterization and drug response of freshly established patient-derived tumor models with cpg island methylator phenotype, *PLoS ONE* **10**, 1–14 (2015).

40. J. Mukohyama, D. Iwakiri, Y. Zen, T. Mukohara, H. Minami, Y. Kakeji, Y. Shimono, Evaluation of the risk of lymphomagenesis in xenografts by the PCR-based detection of EBV BamHI W region in patient cancer specimens., *Oncotarget* **7** (2016), doi:10.18632/oncotarget.10322.

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C. Lung

| Country | Laboratory location | PDX ID | First Author Surname and Year | Associated refs | ARRIVE guidelines? |
|---|---|---|---|---|---|
| Australia | Monash University, Clayton, Victoria | **LX -101 to 112** | Leong 2014*(59)* | | no |
| Australia; Canada | Ludwig Institute for Cancer Research., Melbourne and Ontario Cancer Institute, Toronto | **NR** | John 2011*(60)* | John 2012*(61)* | no |
| Australia; USA | Monash Institute of Medical Research and John Hopkins University, Baltimore | **LX22, LX33, LX36** | Hann 2008*(62)* | Daniel 2009*(63)* | no |
| Canada | Dept. Cancer Endocrinology, Vancouver General Hospital | **LU-1 to 18** | Cutz 2006*(64)* | | no |
| | Dept. Cancer Endocrinology, BC Cancer Agency, University of British Columbia; and The Living Tumor Laboratory, Vancouver Prostate Centre | **NR** | Dong 2010*(65)* | | no |
| | Princess Margaret Cancer Centre, University Health Network, University of Toronto | **PHLC 137, 148,164,192** | Stewart 2015*(66)* | | no |
| China | Discovery Services, Shanghai | **LU-01-xxxx** | Fang 2014*(67)* | | no |
| | Dept. Thoracic Surgery, Peking University Cancer Hospital and Institute | **NR** | Ma 2016*(68)* | | no |
| | Medical Research Center of Guangdong General Hospital & Guangdong Academy of Medical Sciences, Guangdong Lung Cancer Institute | **L004-L140** | Zhang 2013*(25)* | | no |
| | Dept. Radiology, Jiangsu Cancer Institute and Hospital, Nanjing, Jiangsu | **NR** | Zhuang 2017*(69)* | | no |
| China; USA | Crown Bioscience, CA, USA and China | **LU-0858, 1868, 1235, 1901, 2503 (HuPrime)** | Yang 2013*(70)* | | no |
| France | Laboratory of Clinical and Experimental Pathology, Louis Pasteur Hospital, Nice | **LUN-NIC-XXXX** | Llie 2015*(71)* | | no |
| Germany | Max Delbruck Center for Molecular Medicine, Berlin | **PLCxxxx, SQCxxxx, LCCxxxx, ADCxxxx** | Fichtner 2008*(72)* | Merk 2009*(73)* | no |
| Italy | Division of Pathology, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan | **NR** | Russo 2015*(74)* | | no |
| | Fondazione Istituto di Ricovero e Cura a Carattere Scientifico, Istituto Nazionale dei Tumori, Milan | **NR** | Bertolini 2009*(75)* | | no |
| South Korea | Samsung Genome Institute, Samsung Medical Center, Seoul | **NR** | Kim 2015*(76)* | | no |
| | Asan Institute for Life Science, University of Ulsan College of Medicine, Seoul | **NR** | Seol 2013*(77)* | | no |
| Spain | Experimental Oncology, Centro Nacional de Investigaciones Oncológicas (CNIO), Madrid | **PDX 1, 2, 3** | Ambrogio 2016*(78)* | | no |
| USA | Virginia Tech Carilion School of Medicine, Virginia | **LU-064, 073, 086, 095, 117, 124** | Anderson 2015*(79)* | | no |
| | Dept. Microbiology & Immunology & Witebsky Center for Microbial Pathogenesis & Immunology, State University of New York | **NR** | Simpson-Abelson 2009*(80)* | | no |

| | | | | | |
|---|---|---|---|---|---|
| | Dept. Thoracic and Cardiovascular Surgery, The University of Texas MD Anderson Cancer Center, Houston | **NR** | Hao 2015*(81)* | | no |
| | Dept. Surgical Oncology, University of Texas M. D. Anderson Cancer Center, Houston | **NR** | Roife 2017*(82)* | | no |


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D. Prostate

| Country | Primary Laboratory location | PDX ID | First Author Surname and Year | Associated refs | ARRIVE guidelines? |
|---|---|---|---|---|---|
| Australia | Australian Prostate Cancer Research Centre | **UCRU-PR-1, -2, -4** | Russell 2015*(83)* | Jelbart 1988*(84)*; Pittman 1987*(85)* | no |
| | Dept. of Anatomy & Developmental Biology, Monash University | **NR** | Lawrence 2015*(86)* | | no |
| | | | Risbridger 2015*(87)* | Toivanen 2013 | no |
| | Prostate and Breast Cancer Research Group, Monash University | **NR** | Toivanen 2011*(88)* | | no |
| Canada | Dept. Cancer Endocrinology, BC Cancer Agency, Vancouver | **PCa1** | Wang 2005*(89)* | | no |
| | Vancouver Prostate Centre & Department of Urologic Sciences, University of British Columbia | **LTLxxx** | Lin 2013*(90)* | | no |
| Japan | Dept. Urology, Kyoto University Graduate School of Medicine | **KUCaP-2** | Terada 2010*(91)* | | no |
| | | **KUCaP-3** | Yoshikawa 2016*(92)* | | no |
| Switzerland | Dept. Urology, University Hospital Basel | **NR** | Wetterauer 2015*(93)* | | no |
| Netherlands | Depts. of Urology and Pathology, Erasmus University | **PC-XXX** | van Weerden 1996*(94)* | | no |
| USA | Dept. Genitourinary Medical Oncology, The University of Texas M. D. Anderson Cancer Center | **MDA 144-2; -4; -6; -9;** | Aparicio 2011*(95)* | Aparicio 2016*(96)*, Tzelepi 2012*(97)* | no |
| | | **MDA 163, MDA 166, MDA 177, MDA 189, MDA 205** | Aparicio 2016*(96)* | | no |
| | | **MDA 79, MDA 117, MDA 130, MDA 146, MDA 155, MDA 170, MDA 180** | Tzelepi 2012*(97)* | Aparicio 2011*(95)* | no |
| | Dept. of Medical Oncology, Dana Farber Cancer Institute, Brigham and Women's Hospital, Harvard Medical School | **NR** | Priolo 2010*(98)* | | no |
| | Dept. Urology, Case Western Reserve University School of Medicine | **CWR21, 22, 31, 91** | Pretlow 1993*(99)* | Wainstein 1994*(100)* | no |
| | Depts. Medicine, University of California | **LAPC3, -6, -7** | Klein 1997*(101)* | | no |
| | Depts. Pathology and Laboratory Medicine and Surgery, University of North Carolina-Lineberger Comprehensive Cancer Center, University of North Carolina | **xT** | Presnell 2001*(102)* | | no |
| | Dept. Urology, University of California Irvine | **GM0308, RC0309** | Li 2012*(103)* | | no |
| | MD Anderson Cancer Centre | **HPCa xx** | Chen 2013*(104)* | | no |

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Breast, colon, lung, prostate

| Study Tumour Type | Country | Laboratory location | PDX ID | First Author Surname and Year | Associated refs | ARRIVE guidelines? |
|---|---|---|---|---|---|---|
| Breast; Colon; Lung; Prostate | Singapore | PharmaLogicals Research Pte. Ltd. | NR | Fujii 2008*(105)* | | no |
| Breast; Colon | USA | Center for Developmental Therapeutics, Northwestern University | NR | Bondarenko 2015*(106)* | | no |
| Colon; Lung | USA | Department of Immunology, Roswell Park Cancer Institute, NY | Colo205; NR | Hylander 2013*(107)* | | no |
| Breast; Colon; Lung | France | Institut de Cancerologieet d'Immunogenetique, Paris | NR | Levi 1984*(108)* | | no |


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