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# Disruption of chromatin folding domains by somatic genomic rearrangements in human cancer

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## PCAWG Mutational Signatures Working Group

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## PCAWG Germline Cancer Genome Working Group

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## PCAWG Pathogens Working Group

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## Providers of tumour-sequencing data

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### PCAWG Tumour-specific providers (pancreatic cancer) in Australia



Matthew J Anderson<sup>176</sup>, Davide Antonello<sup>396</sup>, Andrew P Barbour<sup>397,398</sup>, Claudio Bassi<sup>396</sup>, Samantha Bersani<sup>399</sup>, **Andrew V Biankin**<sup>#222,345,346,347</sup>, Timothy JC Bruxner<sup>176</sup>, Ivana Cataldo<sup>399,400</sup>, David K Chang<sup>222,345</sup>, Lorraine A Chantrill<sup>345,401</sup>, Yoke-Eng Chiew<sup>391,393</sup>, Angela Chou<sup>345,393</sup>, Angelika N Christ<sup>176</sup>, Sara Cingarlini<sup>36</sup>, Nicole Cloonan<sup>402</sup>, Vincenzo Corbo<sup>400,403</sup>, Maria Vittoria Davi<sup>404</sup>, Fraser R Duthie<sup>222,405</sup>, J Lynn Fink<sup>45,176</sup>, Anthony J Gill<sup>345,406</sup>, Janet S Graham<sup>222,407</sup>, **Sean M Grimmond**<sup>#348</sup>, Ivon Harliwong<sup>176</sup>, Oliver Holmes<sup>295,296</sup>, Nigel B Jamieson<sup>222,347,408</sup>, Amber L Johns<sup>345</sup>, Karin S Kassahn<sup>176,392</sup>, Stephen H Kazakoff<sup>295,296</sup>, James G Kench<sup>345,406,409</sup>, Luca Landoni<sup>396</sup>, Rita T Lawlor<sup>400</sup>, Conrad R Leonard<sup>295,296</sup>, Andrea Mafficini<sup>400</sup>, Neil D Merrett<sup>396,410</sup>, David K Miller<sup>176,345</sup>, Marco Miotto<sup>396</sup>, Elizabeth A Musgrove<sup>222</sup>, Adnan M Nagrial<sup>345</sup>, Felicity Newell<sup>295,296</sup>, Katia Nones<sup>295,296</sup>, Karin A Oien<sup>394,411</sup>, Marina Pajic<sup>345</sup>, Ann-Marie Patch<sup>295,296</sup>, John V Pearson<sup>295,296</sup>, Mark Pinese<sup>345</sup>, Andreia V Pinho<sup>412</sup>, Michael C Quinn<sup>295,296</sup>, Alan J Robertson<sup>176</sup>, Ilse Rooman<sup>345</sup>, Borislav C Rusev<sup>400</sup>, Jaswinder S Samra<sup>396,413</sup>, Maria Scardoni<sup>399</sup>, Christopher J Scarlett<sup>345,414</sup>, Aldo Scarpa<sup>400</sup>, Elisabetta Sereni<sup>396</sup>, Katarzyna O Sikora<sup>400</sup>, Michele Simbolo<sup>403</sup>, Morgan L Taschuk<sup>44</sup>, Christopher W Toon<sup>345</sup>, Giampaolo Tortora<sup>36,37</sup>, Caterina Vicentini<sup>400</sup>, Nick M Waddell<sup>296</sup>, Nicola Waddell<sup>295,296</sup>, Scott Wood<sup>295,296</sup>, Jianmin Wu<sup>345</sup>, Qinying Xu<sup>295,296</sup> and Nikolajs Zeps<sup>415,416</sup>

## PCAWG Tumour-specific providers (skin cancer) in Australia

Lauri A Aaltonen<sup>417</sup>, Andreas Behren<sup>418</sup>, Hazel Burke<sup>419</sup>, Jonathan Cebon<sup>418</sup>, Rebecca A Dagg<sup>420</sup>, Ricardo De Paoli-Iseppi<sup>419</sup>, Ken Dutton-Regester<sup>295</sup>, Matthew A Field<sup>421</sup>, Anna Fitzgerald<sup>422</sup>, Sean M Grimmond<sup>348</sup>, **Nicholas K Hayward**<sup>#295,419</sup>, Peter Hersey<sup>419</sup>, Oliver Holmes<sup>295,296</sup>, Valerie Jakrot<sup>419</sup>, Peter A Johansson<sup>295</sup>, Hojabr Kakavand<sup>419</sup>, Stephen H Kazakoff<sup>295,296</sup>, Richard F Kefford<sup>423</sup>, Loretta MS Lau<sup>424</sup>, Conrad R Leonard<sup>295,296</sup>, Georgina V Long<sup>419</sup>, **Graham J Mann**<sup>#393,419,419</sup>, Felicity Newell<sup>295,296</sup>, Katia Nones<sup>295,296</sup>, Ann-Marie Patch<sup>295,296</sup>, John V Pearson<sup>295,296</sup>, Hilda A Pickett<sup>424</sup>, Antonia L Pritchard<sup>295</sup>, Gulietta M Pupo<sup>393</sup>, Robyn PM Saw<sup>419</sup>, Sarah-Jane Schramm<sup>393</sup>, **Richard A Scolyer**<sup>#409,413,419</sup>, Mark Shackleton<sup>178</sup>, Catherine A Shang<sup>422</sup>, Ping Shang<sup>419</sup>, Andrew J Spillane<sup>419</sup>, Jonathan R Stretch<sup>419</sup>, Varsha Tembe<sup>393</sup>, John F Thompson<sup>419</sup>, Ricardo E Vilain<sup>425</sup>, Nick M Waddell<sup>296</sup>, Nicola Waddell<sup>295,296</sup>, James S Wilmott<sup>419</sup>, Scott Wood<sup>295,296</sup>, Qinying Xu<sup>295,296</sup> and Jean Y Yang<sup>426</sup>

## PCAWG Tumour-specific providers (pancreatic cancer) in Canada

John Bartlett<sup>427,428</sup>, Prashant Bavi<sup>429</sup>, Ivan Borozan<sup>9</sup>, Dianne E Chadwick<sup>430</sup>, Michelle Chan-Seng-Yue<sup>429</sup>, Sean Cleary<sup>429,431</sup>, Ashton A Connor<sup>431,432</sup>, Karolina Czajka<sup>76</sup>, Robert E Denroche<sup>429</sup>, Neesha C Dhani<sup>433</sup>, Jenna Eagles<sup>76</sup>, Vincent Ferretti<sup>44,65</sup>, Steven Gallinger<sup>429,431,432</sup>, Robert C Grant<sup>429,432</sup>, David Hedley<sup>433</sup>, Michael A Hollingsworth<sup>434</sup>, **Thomas J Hudson**<sup>#75,76</sup>, Gun Ho Jang<sup>429</sup>, Jeremy Johns<sup>76</sup>, Sangeetha Kalimuthu<sup>429</sup>, Sheng-Ben Liang<sup>430</sup>, Ilinca Lungu<sup>429,435</sup>, Xuemei Luo<sup>9</sup>, Faridah Mbabaali<sup>76</sup>, **John D McPherson**<sup>#76,429,436</sup>, Treasa A McPherson<sup>432</sup>, Jessica K Miller<sup>76</sup>, Malcolm J Moore<sup>433</sup>, Faiyaz Notta<sup>429,437</sup>, Danielle Pasternack<sup>76</sup>, Gloria M Petersen<sup>438</sup>, Michael H A Roehrl<sup>125,429,430,439,440,441</sup>, Michelle Sam<sup>76</sup>, Iris Selander<sup>432</sup>, Stefano Serra<sup>394</sup>, Sagedeh Shahabi<sup>430</sup>, **Lincoln D Stein**<sup>#9,10</sup>, Morgan L Taschuk<sup>44</sup>, Sarah P Thayer<sup>434</sup>, Lee E Timms<sup>76</sup>, Gavin W Wilson<sup>9,429</sup>, Julie M Wilson<sup>429</sup> and Bradly G Wouters<sup>125</sup>

## PCAWG Tumour-specific providers (prostate cancer) in Canada

Timothy A Beck<sup>44,442</sup>, Vinayak Bhandari<sup>9</sup>, **Paul C Boutros**<sup>#9,125,134,135</sup>, **Robert G Bristow**<sup>#125,443,444,445,446</sup>, Colin C Collins<sup>142</sup>, Shadrielle MG Espiritu<sup>9</sup>, Neil E Fleshner<sup>447</sup>, Natalie S Fox<sup>9</sup>, Michael Fraser<sup>9</sup>, Syed Haider<sup>9</sup>, Lawrence E Heisler<sup>44</sup>, Vincent Huang<sup>9</sup>, Emilie Lalonde<sup>9</sup>, Julie Livingstone<sup>9</sup>, John D McPherson<sup>76,429,436</sup>, Alice Meng<sup>448</sup>, Veronica Y Sabelnykova<sup>9</sup>, Adriana Salcedo<sup>9</sup>, Yu-Jia Shiah<sup>9</sup>, Theodorus Van der Kwast<sup>441</sup> and Takafumi N Yamaguchi<sup>9</sup>

## PCAWG Tumour-specific providers (gastric cancer) in China

Shuai Ding<sup>449</sup>, Daiming Fan<sup>450</sup>, Yong Hou<sup>38,235</sup>, Yi Huang<sup>144,145</sup>, Lin Li<sup>38</sup>, Siliang Li<sup>38,235</sup>, Dongbing Liu<sup>38,235</sup>, Xingmin Liu<sup>38,235</sup>, **Yuyong Lu**<sup>#28,29,30</sup>, Yongzhan Nie<sup>450,451</sup>, Hong Su<sup>38,235</sup>, Jian Wang<sup>38</sup>, Kui Wu<sup>38,235</sup>, Xiao Xiao<sup>145</sup>, Rui Xing<sup>30</sup>, **Huanming Yang**<sup>#38</sup>, Shanlin Yang<sup>449</sup>, Yingyan Yu<sup>452</sup>, Xiuqing Zhang<sup>38</sup>, Yong Zhou<sup>38</sup> and Shida Zhu<sup>38,235</sup>

## PCAWG Tumour-specific providers (renal cancer) in the EU & France

Rosamonde E Banks<sup>453</sup>, Guillaume Bourque<sup>454,455</sup>, Alvis Brazma<sup>7</sup>, Paul Brennan<sup>456</sup>, **Mark Lathrop**<sup>#455</sup>, Louis Letourneau<sup>457</sup>, Yasser Riazalhosseini<sup>455</sup>, Ghislaine Scelo<sup>456</sup>, **Jörg Tost**<sup>#458</sup>, Naveen Vasudev<sup>459</sup> and Juris Viksna<sup>460</sup>

## PCAWG Tumour-specific providers (breast cancer) in the EU & United Kingdom

Sung-Min Ahn<sup>461</sup>, Ludmil B Alexandrov<sup>1,70,302</sup>, Samuel Aparicio<sup>462</sup>, Laurent Arnould<sup>463</sup>, MR Aure<sup>464</sup>, Shriram G Bhosle<sup>1</sup>, Ewan Birney<sup>7</sup>, Ake Borg<sup>465</sup>, Sandrine Boyault<sup>466</sup>, Arie B Brinkman<sup>467</sup>, Jane E Brock<sup>468</sup>, Annegien Broeks<sup>469</sup>, Adam P Butler<sup>1</sup>, Anne-Lise Børresen-Dale<sup>464,470</sup>, Carlos Caldas<sup>278,471</sup>, Peter J Campbell<sup>1,2</sup>, Suet-Feung Chin<sup>278,471</sup>, Helen Davies<sup>1,309,310</sup>, Christine Desmedt<sup>472,473</sup>, Luc Dirix<sup>474</sup>, Serge Serge<sup>1</sup>, Anna Ehinger<sup>475</sup>, Jorunn E Eyfjord<sup>476</sup>, Aquila Fatima<sup>204</sup>, John A Foekens<sup>477</sup>, P Andrew Futreal<sup>478</sup>, Øystein Garred<sup>479,480</sup>, Moritz Gerstung<sup>7,8</sup>, Dilip D Giri<sup>481</sup>, Dominik Glodzik<sup>1</sup>, Dorte Grabau<sup>482</sup>, Holmfridur Hilmarsdottir<sup>476</sup>, Gerrit K Hooijer<sup>483</sup>, Jocelyne Jacquemier<sup>484</sup>, Se Jin Jang<sup>485</sup>, Jon G Jonasson<sup>476</sup>, Jos Jonkers<sup>486</sup>, Hyung-Yong Kim<sup>484</sup>, Tari A King<sup>487,488,489</sup>, Stian Knappskog<sup>1,490</sup>, Gu Kong<sup>484</sup>, Savitri Krishnamurthy<sup>352,491</sup>, Sunil R Lakhani<sup>492</sup>, Anita Langerød<sup>464</sup>, Denis Larsimont<sup>493</sup>, Hee Jin Lee<sup>485</sup>, Jeong-Yeon Lee<sup>494</sup>, Ming Ta Michael Lee<sup>478</sup>, Yilong Li<sup>1</sup>, Ole Christian Lingjærde<sup>495</sup>, Gaetan MacGrogan<sup>496</sup>, John WM Martens<sup>477</sup>, Sancha Martin<sup>1,353</sup>, Iñigo Martincorena<sup>1</sup>, Andrew Menzies<sup>1</sup>, Sandro Morganella<sup>1</sup>, Ville Mustonen<sup>305,306,307</sup>, Serena Nik-Zainal<sup>1,309,310,311</sup>, Sarah O'Meara<sup>1</sup>, Iris Pauporté<sup>20</sup>, Sarah Pinder<sup>497</sup>, Xavier Pivot<sup>498</sup>, Elena Provenzano<sup>499</sup>, Colin A Purdie<sup>500</sup>, Keiran M Raine<sup>1</sup>, Manasa Ramakrishna<sup>1</sup>, Kamna Ramakrishnan<sup>1</sup>, Jorge Reis-Filho<sup>481</sup>, Andrea L Richardson<sup>204</sup>, Markus Ringnér<sup>501</sup>, Javier Bartolomé

Rodriguez<sup>45</sup>, F Germán Rodríguez-González<sup>502</sup>, Gilles Romieu<sup>503</sup>, Roberto Salgado<sup>394</sup>, Torill Sauer<sup>495</sup>, Rebecca Shepherd<sup>1</sup>, Anieta M Sieuwerts<sup>477</sup>, Peter T Simpson<sup>492</sup>, Marcel Smid<sup>477</sup>, Christos Sotiriou<sup>53</sup>, Paul N Span<sup>504</sup>, Lucy Stebbings<sup>1</sup>, Ólafur Andri Stefánsson<sup>505</sup>, Alasdair Stenhouse<sup>506</sup>, **Michael R Stratton**<sup>#1</sup>, Henk G Stunnenberg<sup>235,507</sup>, Fred Sweep<sup>508</sup>, Benita Kiat Tee Tan<sup>509</sup>, Jon W Teague<sup>1</sup>, Gilles Thomas<sup>510</sup>, Alastair M Thompson<sup>506</sup>, Stefania Tommasi<sup>511</sup>, Isabelle Treilleux<sup>512,513</sup>, Andrew Tutt<sup>204</sup>, Naoto T Ueno<sup>514</sup>, Steven Van Laere<sup>474</sup>, Peter Van Loo<sup>60,61</sup>, Gert G Van den Eynden<sup>474</sup>, Peter Vermeulen<sup>474</sup>, Alain Viari<sup>400</sup>, Anne Vincent-Salomon<sup>507</sup>, David C Wedge<sup>1,340,341</sup>, Bernice H Wong<sup>515</sup>, Lucy Yates<sup>1</sup>, Xueqing Zou<sup>1</sup>, Carolien HM van Deurzen<sup>516</sup>, Marc J van de Vijver<sup>394</sup> and L van't Veer<sup>517</sup>

## **PCAWG Tumour-specific providers (malignant lymphoma) in Germany**

Ole Ammerpohl<sup>518,519</sup>, Sietse Aukema<sup>520,521</sup>, Anke K Bergmann<sup>522</sup>, Stephan H Bernhart<sup>260,261,264</sup>, Hans Binder<sup>260,261</sup>, Arndt Borkhardt<sup>523</sup>, Christoph Borst<sup>524</sup>, Benedikt Brors<sup>79,112,262</sup>, Birgit Burkhardt<sup>525</sup>, Alexander Claviez<sup>526</sup>, Roland Eils<sup>50,52,63,64</sup>, Maria Elisabeth Goebler<sup>527</sup>, Andrea Haake<sup>518</sup>, Siegfried Haas<sup>524</sup>, Martin Hansmann<sup>528</sup>, Jessica I Hoell<sup>523</sup>, Steve Hoffmann<sup>260,261,263,264</sup>, Michael Hummel<sup>529</sup>, Daniel Hübschmann<sup>52,63,80,81,82</sup>, Dennis Karsch<sup>530</sup>, Wolfram Klapper<sup>520</sup>, Kortine Kleinheinz<sup>50,52</sup>, Michael Kneba<sup>530</sup>, Jan O Korbel<sup>7,8</sup>, Helene Kretzmer<sup>261,264</sup>, Markus Kreuz<sup>531</sup>, Dieter Kube<sup>532</sup>, Ralf Küppers<sup>533</sup>, Chris Lawerenz<sup>64</sup>, Dido Lenze<sup>529</sup>, Peter Lichter<sup>77,386</sup>, Markus Loeffler<sup>531</sup>, Cristina López<sup>246,518</sup>, Luisa Mantovani-Löffler<sup>534</sup>, Peter Möller<sup>535</sup>, German Ott<sup>536</sup>, Bernhard Radlwimmer<sup>386</sup>, Julia Richter<sup>518,520</sup>, Marius Rohde<sup>537</sup>, Philip C Rosenstiel<sup>538</sup>, Andreas Rosenwald<sup>539</sup>, Markus B Schilhabel<sup>538</sup>, Matthias Schlesner<sup>50,102</sup>, Stefan Schreiber<sup>540</sup>, **Reiner Siebert**<sup>#245,246</sup>, Peter F Stadler<sup>260,261,264</sup>, Peter Staib<sup>541</sup>, Stephan Stilgenbauer<sup>542</sup>, Stephanie Sungalee<sup>8</sup>, Monika Szczepanowski<sup>520</sup>, Umut H Toprak<sup>52,543</sup>, Lorenz HP Trümper<sup>532</sup>, Rabea Wagener<sup>246,518</sup> and Thorsten Zenz<sup>79</sup>

## **PCAWG Tumour-specific providers (paediatric brain cancer) in Germany**

Ivo Buchhalter<sup>50,51,52</sup>, Juergen Eils<sup>63,64</sup>, Roland Eils<sup>50,52,63,64</sup>, Volker Hovestadt<sup>386</sup>, Barbara Hutter<sup>77,78,79</sup>, David TW Jones<sup>285,286</sup>, Natalie Jäger<sup>50</sup>, Christof von Kalle<sup>81</sup>, Marcel Kool<sup>93,285</sup>, Jan O Korbel<sup>7,8</sup>, Andrey Korshunov<sup>93</sup>, Pablo Landgraf<sup>544,545</sup>, Chris Lawerenz<sup>64</sup>, Hans Lehrach<sup>546</sup>, **Peter Lichter**<sup>#77,386</sup>, Paul A Northcott<sup>547</sup>, Stefan M Pfister<sup>93,285,548</sup>, Bernhard Radlwimmer<sup>386</sup>, Guido Reifenberger<sup>545</sup>, Matthias Schlesner<sup>50,102</sup>, Hans-Jörg Warnatz<sup>546</sup>, Joachim Weischenfeldt<sup>8,107,108</sup>, Stephan Wolf<sup>549</sup>, Marie-Laure Yaspo<sup>546</sup> and Marc Zapatka<sup>386</sup>

## **PCAWG Tumour-specific providers (prostate cancer) in Germany**

Yassen Assenov<sup>550</sup>, Benedikt Brors<sup>79,112,262</sup>, Juergen Eils<sup>63,64</sup>, Roland Eils<sup>50,52,63,64</sup>, Lars Feuerbach<sup>112</sup>, Clarissa Gerhauser<sup>268</sup>, Jan O Korbel<sup>7,8</sup>, Chris Lawerenz<sup>64</sup>, Hans Lehrach<sup>546</sup>, Sarah Minner<sup>551</sup>,

Christoph Plass<sup>268</sup>, **Guido Sauter**<sup>#552</sup>, Thorsten Schlomm<sup>107,553</sup>, Nikos Sidiropoulos<sup>108</sup>, Ronald Simon<sup>552</sup>, **Holger Sültmann**<sup>#79,554</sup>, Hans-Jörg Warnatz<sup>546</sup>, Dieter Weichenhan<sup>268</sup>, Joachim Weischenfeldt<sup>8,107,108</sup> and Marie-Laure Yaspo<sup>546</sup>

## **PCAWG Tumour-specific providers (oral cancer) in India**

Nidhan K Biswas<sup>555</sup>, Luca Landoni<sup>396</sup>, Arindam Maitra<sup>555</sup>, **Partha P Majumder**<sup>#555</sup> and **Rajiv Sarin**<sup>#556</sup>

## **PCAWG Tumour-specific providers (pancreatic cancer) in Italy**

Davide Antonello<sup>396</sup>, Stefano Barbi<sup>403</sup>, Claudio Bassi<sup>396</sup>, Samantha Bersani<sup>399</sup>, Giada Bonizzato<sup>400</sup>, Cinzia Cantù<sup>400</sup>, Ivana Cataldo<sup>399,400</sup>, Sara Cingarlini<sup>36</sup>, Vincenzo Corbo<sup>400,403</sup>, Maria Vittoria Davi<sup>404</sup>, Angelo P Dei Tos<sup>557</sup>, Matteo Fassan<sup>558</sup>, Sonia Grimaldi<sup>400</sup>, Luca Landoni<sup>396</sup>, Rita T Lawlor<sup>400</sup>, Claudio Luchini<sup>399</sup>, Andrea Mafficini<sup>400</sup>, Giuseppe Malleo<sup>396</sup>, Giovanni Marchegiani<sup>396</sup>, Michele Milella<sup>36</sup>, Marco Miotto<sup>396</sup>, Salvatore Paiella<sup>396</sup>, Antonio Pea<sup>396</sup>, Paolo Pederzoli<sup>396</sup>, Borislav C Rusev<sup>400</sup>, Andrea Ruzzenente<sup>396</sup>, Roberto Salvia<sup>396</sup>, Maria Scardoni<sup>399</sup>, **Aldo Scarpa**<sup>#400</sup>, Elisabetta Sereni<sup>396</sup>, Michele Simbolo<sup>403</sup>, Nicola Sperandio<sup>400</sup>, Giampaolo Tortora<sup>36,37</sup> and Caterina Vicentini<sup>400</sup>

## **PCAWG Tumour-specific providers (biliary tract cancer) in Japan**

Yasuhito Arai<sup>33</sup>, Natsuko Hama<sup>33</sup>, Nobuyoshi Hiraoka<sup>559</sup>, Fumie Hosoda<sup>33</sup>, Mamoru Kato<sup>351</sup>, Hiromi Nakamura<sup>33</sup>, Hidenori Ojima<sup>560</sup>, Takuji Okusaka<sup>561</sup>, **Tatsuhiko Shibata**<sup>#33,34</sup>, Yasushi Totoki<sup>33</sup> and Tomoko Urushidate<sup>34</sup>

## **PCAWG Tumour-specific providers (gastric cancer) in Japan**

**Hiroyuki Aburatani**<sup>#256</sup>, Yasuhito Arai<sup>33</sup>, Masashi Fukayama<sup>562</sup>, Natsuko Hama<sup>33</sup>, Fumie Hosoda<sup>33</sup>, Shumpei Ishikawa<sup>563</sup>, Hitoshi Katai<sup>564</sup>, Mamoru Kato<sup>351</sup>, Hiroto Katoh<sup>563</sup>, Daisuke Komura<sup>563</sup>, Genta Nagae<sup>256,267</sup>, Hiromi Nakamura<sup>33</sup>, Hirofumi Rokutan<sup>351</sup>, Mihoko Saito-Adachi<sup>351</sup>, **Tatsuhiko Shibata**<sup>#33,34</sup>, Akihiro Suzuki<sup>256,565</sup>, Hirokazu Taniguchi<sup>34</sup>, Kenji Tatsuno<sup>256</sup>, Yasushi Totoki<sup>33</sup>, Tetsuo Ushiku<sup>562</sup>, Shinichi Yachida<sup>33,566</sup> and Shogo Yamamoto<sup>256</sup>

## **PCAWG Tumour-specific providers (liver cancer) in Japan**

Hiroyuki Aburatani<sup>256</sup>, Hiroshi Aikata<sup>567</sup>, Koji Arihiro<sup>567</sup>, Shun-ichi Ariizumi<sup>568</sup>, Keith A Boroevich<sup>46,47</sup>, Kazuaki Chayama<sup>567</sup>, Akihiro Fujimoto<sup>47</sup>, Masashi Fujita<sup>47</sup>, Mayuko Furuta<sup>47</sup>, Kunihito Gotoh<sup>569</sup>, Natsuko Hama<sup>33</sup>, Takanori Hasegawa<sup>83</sup>, Shinya Hayami<sup>570</sup>, Shuto Hayashi<sup>83</sup>, Satoshi Hirano<sup>571</sup>, Seiya Imoto<sup>83</sup>, Mamoru Kato<sup>351</sup>, Yoshiiku Kawakami<sup>567</sup>, Kazuhiro Maejima<sup>47</sup>,

Satoru Miyano<sup>83</sup>, Genta Nagae<sup>256,267</sup>, **Hidewaki Nakagawa**<sup>#47</sup>, Hiromi Nakamura<sup>33</sup>, Toru Nakamura<sup>571</sup>, Kaoru Nakano<sup>47</sup>, Hideki Ohdan<sup>567</sup>, Yasushi Rino<sup>572</sup>, Aya Sasaki-Oku<sup>47</sup>, **Tatsuhiko Shibata**<sup>#33,34</sup>, Yuichi Shiraishi<sup>83</sup>, Hiroko Tanaka<sup>83</sup>, Yasushi Totoki<sup>33</sup>, Tatsuhiko Tsunoda<sup>46,207,208,209</sup>, Masaki Ueno<sup>570</sup>, Rui Yamaguchi<sup>83</sup>, Masakazu Yamamoto<sup>568</sup> and Hiroki Yamaue<sup>570</sup>

## **PCAWG Tumour-specific providers (biliary tract cancer) in Singapore**

Su Pin Choo<sup>573</sup>, Ioana Cutcutache<sup>251,304</sup>, Narong Khuntikeo<sup>396,574</sup>, John R McPherson<sup>251,304</sup>, Choon Kiat Ong<sup>575</sup>, Chawalit Pairojkul<sup>394</sup>, Irinel Popescu<sup>576</sup>, **Steven G Rozen**<sup>#251,252,304</sup>, **Patrick Tan**<sup>#239,250,251,252</sup> and **Bin Tean Teh**<sup>#250,251,252,253,254</sup>

## **PCAWG Tumour-specific providers (blood cancer) in South Korea**

Keun Soo Ahn<sup>577</sup>, Hyung-Lae Kim<sup>27</sup>, Youngil Koh<sup>291,292</sup> and **Sung-Soo Yoon**<sup>#292</sup>

## **PCAWG Tumour-specific providers (chronic lymphocytic leukaemia) in Spain**

Marta Aymerich<sup>578</sup>, **Elias Campo**<sup>#579,580</sup>, Josep L L Gelpi<sup>45,67</sup>, Ivo G Gut<sup>127,128</sup>, Marta Gut<sup>127,128</sup>, Armando Lopez-Guillermo<sup>581</sup>, Carlos López-Otín<sup>582</sup>, Xose S Puente<sup>582</sup>, Romina Royo<sup>45</sup> and David Torrents<sup>45,105</sup>

## **PCAWG Tumour-specific providers (bone cancer) in the United Kingdom**

Fernanda Amary<sup>583</sup>, Daniel Baumhoer<sup>584</sup>, Sam Behjati<sup>1</sup>, Bodil Bjerkehagen<sup>584,585</sup>, **Peter J Campbell**<sup>#1,2</sup>, **Adrienne M Flanagan**<sup>#586</sup>, P Andrew Futreal<sup>478</sup>, Ola Myklebost<sup>490</sup>, Nischalan Pillay<sup>587</sup>, Patrick Tarpey<sup>588</sup>, Roberto Tirabosco<sup>589</sup> and Olga Zaikova<sup>590</sup>

## **PCAWG Tumour-specific providers (chronic myeloid disorders) in the United Kingdom**

Jacqueline Boulton<sup>591</sup>, David T Bowen<sup>1</sup>, Adam P Butler<sup>1</sup>, **Peter J Campbell**<sup>#1,2</sup>, Mario Cazzola<sup>592</sup>, Carlo Gambacorti-Passerini<sup>177</sup>, Anthony R Green<sup>279</sup>, Eva Hellstrom-Lindberg<sup>593</sup>, Luca Malcovati<sup>592</sup>, Sancha Martin<sup>1,353</sup>, Jyoti Nangalia<sup>1</sup>, Elli Papaemmanuil<sup>2</sup> and Paresh Vyas<sup>295,594</sup>

## **PCAWG Tumour-specific providers (oesophageal cancer) in the**

## United Kingdom

Yeng Ang<sup>595</sup>, Hugh Barr<sup>596</sup>, Duncan Beardsmore<sup>597</sup>, Matthew Eldridge<sup>278</sup>, **Rebecca C Fitzgerald#**<sup>310</sup>, James Gossage<sup>598</sup>, Nicola Grehan<sup>310</sup>, George B Hanna<sup>599</sup>, Stephen J Hayes<sup>600,601</sup>, Ted R Hupp<sup>602</sup>, David Khoo<sup>603</sup>, Jesper Lagergren<sup>593,604</sup>, Laurence B Lovat<sup>237</sup>, Shona MacRae<sup>375</sup>, Maria O'Donovan<sup>310</sup>, J Robert O'Neill<sup>605</sup>, Simon L Parsons<sup>606</sup>, Shaun R Preston<sup>607</sup>, Sonia Puig<sup>608</sup>, Tom Roques<sup>609</sup>, Grant Sanders<sup>234</sup>, Sharmila Sothi<sup>610</sup>, Simon Tavaré<sup>278</sup>, Olga Tucker<sup>611</sup>, Richard Turkington<sup>612</sup>, Timothy J Underwood<sup>613</sup> and Ian Welch<sup>614</sup>

## PCAWG Tumour-specific providers (prostate cancer) in the United Kingdom

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## PCAWG Tumour-specific providers (TCGA) in the United States

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