

# Supplementary Information:

## *TCGA/ICGC Pan-Cancer Analysis of Whole Genomes Network*

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## Novel somatic mutation calling methods

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## Drivers and functional interpretation

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## Integration of transcriptome and genome

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## Integration of epigenome and genome

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## Patterns of structural variations, signatures, genomic correlations, retrotransposons, mobile elements

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Gerstein<sup>120,121,122,123</sup>, Dmitry A Gordenin<sup>297</sup>, David Haan<sup>11</sup>, James E Haber<sup>298</sup>, Julian M Hess<sup>3,75</sup>, Barbara Hutter<sup>80,81,82</sup>, Marcin Imielinski<sup>299,300</sup>, David TW Jones<sup>301,302</sup>, Young Seok Ju<sup>2,181</sup>, Marat D Kazanov<sup>303,304,305</sup>, Leszek J Klimczak<sup>306</sup>, Youngil Koh<sup>307,308</sup>, Jan O Korbel<sup>7,8</sup>, Kiran Kumar<sup>3</sup>, Eunjung Alice Lee<sup>309</sup>, Jake June-Koo Lee<sup>238,259</sup>, Yilong Li<sup>2</sup>, Andy G Lynch<sup>294,295,310</sup>, Geoff Macintyre<sup>294</sup>, Florian Markowitz<sup>294,295</sup>, Iñigo Martincorena<sup>2</sup>, Alexander Martinez-Fundichely<sup>117,118,130</sup>, Matthew Meyerson<sup>3,6,49,177,253</sup>, Satoru Miyano<sup>87</sup>, Hidewaki Nakagawa<sup>48</sup>, Fabio CP Navarro<sup>122</sup>, Stephan Ossowski<sup>136,147,157</sup>, Peter J Park<sup>238,259</sup>, John V Pearson<sup>311,312</sup>, Montserrat Puiggròs<sup>105</sup>, Karsten Rippe<sup>84</sup>, Nicola D Roberts<sup>2</sup>, Steven A Roberts<sup>313</sup>, Bernardo Rodriguez-Martin<sup>287,288,289</sup>, Steven E Schumacher<sup>3,217</sup>, Ralph Scully<sup>314</sup>, Mark Shackleton<sup>188,218</sup>, Nikos Sidiropoulos<sup>113</sup>, Lina Sieverling<sup>119,180</sup>, Chip Stewart<sup>3</sup>, David Torrents<sup>105,111</sup>, Jose MC Tubio<sup>287,288,289</sup>, Izar Villasante<sup>105</sup>, Nicola Waddell<sup>311,312</sup>, Jeremiah A Wala<sup>3,6,49</sup>, Joachim Weischenfeldt<sup>8,113,114</sup>, Lixing Yang<sup>315</sup>, Xiaotong Yao<sup>299,316</sup>, Sung-Soo Yoon<sup>308</sup>, Jorge Zamora<sup>2,287,288,289</sup> and Cheng-Zhong Zhang<sup>3,6,49</sup>

## Mutation signatures and processes

Ludmil B Alexandrov<sup>2,317</sup>, Erik N Bergstrom<sup>318</sup>, Arnoud Boot<sup>267,319</sup>, Paul C Boutros<sup>9,133,142,143</sup>, Kin Chan<sup>293</sup>, Kyle Covington<sup>165</sup>, Akihiro Fujimoto<sup>48</sup>, Gad Getz<sup>3,4,5,6</sup>, Dmitry A Gordenin<sup>297</sup>, Nicholas J Haradhvala<sup>3,106</sup>, Mi Ni Huang<sup>267,319</sup>, S. M. Ashiqul Islam<sup>317</sup>, Marat D Kazanov<sup>303,304,305</sup>, Jaegil Kim<sup>3</sup>, Leszek J Klimczak<sup>306</sup>, Michael S Lawrence<sup>3,47,106</sup>, Iñigo Martincorena<sup>2</sup>, John R McPherson<sup>267,319</sup>, Sandro Morganello<sup>2</sup>, Ville Mustonen<sup>320,321,322</sup>, Hidewaki Nakagawa<sup>48</sup>, Avlin Wei Tian Ng<sup>323</sup>, Serena Nik-Zainal<sup>2,324,325,326</sup>, Paz Polak<sup>3,4,6</sup>, Stephenie D Prokopec<sup>9</sup>, Steven A Roberts<sup>313</sup>, **Steven G Rozen**<sup>267,268,319</sup>, Radhakrishnan Sabarinathan<sup>183,190,214</sup>, Natalie Saini<sup>297</sup>, Tatsuhiro Shibata<sup>33,34</sup>, Yuichi Shiraishi<sup>87</sup>, **Michael Rudolf Stratton**<sup>2</sup>, **Bin Tean Teh**<sup>266,267,268,269,270</sup>, Ignacio Vázquez-García<sup>2,167,327,328</sup>, Yang Wu<sup>267,319</sup>, Fouad Yousif<sup>9</sup> and Willie Yu<sup>329</sup>

## Germline cancer genome

Ludmil B Alexandrov<sup>2,317</sup>, Eva G Alvarez<sup>287,288,289</sup>, Adrian Baez-Ortega<sup>290</sup>, Matthew H Bailey<sup>138,139</sup>, Mattia Bosio<sup>46,136,147</sup>, G Steven Bova<sup>330</sup>, Alvis Brazma<sup>7</sup>, Alicia L Bruzos<sup>287,288,289</sup>, Ivo Buchhalter<sup>52,53,54</sup>, Carlos D Bustamante<sup>60,61</sup>, Atul J Butte<sup>331</sup>, Andy Cafferkey<sup>7</sup>, Claudia Calabrese<sup>7,8</sup>, Peter J Campbell<sup>1,2</sup>, Stephen J Chanock<sup>332</sup>, Nilanjan Chatterjee<sup>333,334</sup>, Jieming Chen<sup>123,335</sup>, Francisco M De La Vega<sup>59,59,60,61,62</sup>, Olivier Delaneau<sup>336,337,338</sup>, German M Demidov<sup>136,147,339</sup>, Anthony DiBiase<sup>340</sup>, Li Ding<sup>138,139,146</sup>, Oliver Drechsel<sup>136,147</sup>, Lewis Jonathan Dursi<sup>9,65</sup>, Douglas F Easton<sup>341,342</sup>, Serap Erkek<sup>8</sup>, Georgia Escaramis<sup>147,343,344</sup>, **Xavier Estivill**<sup>296</sup>, Erik Garrison<sup>2</sup>, Mark Gerstein<sup>120,121,122,123</sup>, Gad Getz<sup>3,4,5,6</sup>, Dmitry A Gordenin<sup>297</sup>, Nina Habermann<sup>8</sup>, Olivier Harismendy<sup>73</sup>, Eoghan Harrington<sup>345</sup>, Shuto Hayashi<sup>87</sup>, José María Heredia-Genestar<sup>346</sup>, Aliaksei Z Holik<sup>147</sup>, Xing Hua<sup>332</sup>, Kuan-lin Huang<sup>139,347</sup>, Seiya Imoto<sup>86,87</sup>, Sissel Juul<sup>345</sup>, Ekta Khurana<sup>117,118,130,131</sup>, Hyung-Lae Kim<sup>27</sup>, Youngwook Kim<sup>96,97</sup>, Leszek J Klimczak<sup>306</sup>, **Jan O Korbel**<sup>7,8</sup>, Roelof Koster<sup>348</sup>, Sushant Kumar<sup>122,123</sup>, Ivica Letunic<sup>155</sup>, Yilong Li<sup>2</sup>, Tomas Marques-Bonet<sup>111,135,346,349</sup>, R Jay Mashl<sup>139,156</sup>, Simon Mayes<sup>350</sup>, Michael D McLellan<sup>138,139,146</sup>, Lisa Mirabello<sup>332</sup>, Francesc Muyas<sup>136,147,339</sup>, Hidewaki Nakagawa<sup>48</sup>, Arcadi Navarro<sup>111,135,346</sup>, Steven J Newhouse<sup>7</sup>, Stephan Ossowski<sup>136,147,157</sup>, Esa Pitkänen<sup>8</sup>, Aparna Prasad<sup>136</sup>, Raquel Rabionet<sup>136,147,351</sup>, Benjamin Raeder<sup>8</sup>, Tobias Rausch<sup>8</sup>, Steven A Roberts<sup>313</sup>, Bernardo Rodriguez-Martin<sup>287,288,289</sup>, Gunnar

Rätsch<sup>90,93,94,107,108,109</sup>, Natalie Saini<sup>297</sup>, Matthias Schlesner<sup>52,110</sup>, Roland F Schwarz<sup>7,84,250,260</sup>, Ayellet V Segre<sup>3,3,352</sup>, Tal Shmaya<sup>59</sup>, Suyash S Shringarpure<sup>61</sup>, Nikos Sidiropoulos<sup>113</sup>, Reiner Siebert<sup>261,262</sup>, Jared T Simpson<sup>9,160</sup>, Lei Song<sup>332</sup>, Oliver Stegle<sup>7,8,265</sup>, Hana Susak<sup>136,147</sup>, Tomas J Tanskanen<sup>353</sup>, Grace Tiao<sup>3</sup>, Marta Tojo<sup>289</sup>, Jose MC Tubio<sup>287,288,289</sup>, Daniel J Turner<sup>350</sup>, Lara Urban<sup>7,8</sup>, Sebastian M Waszak<sup>8</sup>, David C Wedge<sup>2,354,355</sup>, Joachim Weischenfeldt<sup>8,113,114</sup>, David A Wheeler<sup>164,165</sup>, Mark H Wright<sup>61</sup>, Dai-Ying Wu<sup>59</sup>, Tian Xia<sup>356</sup>, Sergei Yakneen<sup>8</sup>, Kai Ye<sup>161,166</sup>, Venkata D Yellapantula<sup>167,168</sup>, Jorge Zamora<sup>2,287,288,289</sup> and Bin Zhu<sup>332</sup>

## Tumor subtypes and clinical translation

Fatima Al-Shahrour<sup>357</sup>, Gurnit Atwal<sup>9,10,358</sup>, Peter J Bailey<sup>236</sup>, **Andrew V Biankin**<sup>#359,360,361,362</sup>, Paul C Boutros<sup>9,133,142,143</sup>, Peter J Campbell<sup>1,2</sup>, David K Chang<sup>360,362</sup>, Susanna L Cooke<sup>362</sup>, Vikram Deshpande<sup>106</sup>, Bishoy M Faltas<sup>109</sup>, William C Faquin<sup>106</sup>, **Levi Garraway**<sup>#49</sup>, Gad Getz<sup>3,4,5,6</sup>, **Sean M Grimmond**<sup>#363</sup>, Syed Haider<sup>9</sup>, **Katherine A Hoadley**<sup>#247,248</sup>, Wei Jiao<sup>9</sup>, Vera B Kaiser<sup>364</sup>, Rosa Karlić<sup>365</sup>, Mamoru Kato<sup>366</sup>, Kirsten Kübler<sup>3,6,106</sup>, Alexander J Lazar<sup>367</sup>, Constance H Li<sup>9,133</sup>, David N Louis<sup>106</sup>, Adam Margolin<sup>368</sup>, Sancha Martin<sup>2,369</sup>, Hardeep K Nahal-Bose<sup>45</sup>, G Petur Nielsen<sup>106</sup>, Serena Nik-Zainal<sup>2,324,325,326</sup>, Larsson Omberg<sup>100</sup>, Christine P'ng<sup>9</sup>, Marc D Perry<sup>45,103</sup>, Paz Polak<sup>3,4,6</sup>, Esther Rheinbay<sup>3,6,106</sup>, Mark A Rubin<sup>131,194,210,211,212</sup>, Colin A Semple<sup>364</sup>, Dennis C Sgroi<sup>106</sup>, Tatsuhiro Shibata<sup>33,34</sup>, Reiner Siebert<sup>261,262</sup>, Jaclyn Smith<sup>368</sup>, **Lincoln D Stein**<sup>#9,10</sup>, Miranda D Stobbe<sup>135,136</sup>, Ren X Sun<sup>9</sup>, Kevin Thai<sup>45</sup>, Derek W Wright<sup>370,371</sup>, Chin-Lee Wu<sup>106</sup>, Ke Yuan<sup>294,369,372</sup> and Junjun Zhang<sup>45</sup>

## Evolution and heterogeneity

David J Adams<sup>2</sup>, Pavana Anur<sup>373</sup>, Rameen Beroukhim<sup>3,6,172</sup>, Paul C Boutros<sup>9,133,142,143</sup>, David D L Bowtell<sup>187,291</sup>, Peter J Campbell<sup>1,2</sup>, Shaolong Cao<sup>148</sup>, Elizabeth L Christie<sup>187</sup>, Marek Cmero<sup>374,375,376</sup>, Yupeng Cun<sup>377</sup>, Kevin J Dawson<sup>2</sup>, Jonas Demeulemeester<sup>63,64</sup>, Stefan C Dentre<sup>2,64,354</sup>, Amit G Deshwar<sup>378</sup>, Nilgun Donmez<sup>151,159</sup>, Ruben M Drews<sup>294</sup>, Roland Eils<sup>52,54,66,67</sup>, Yu Fan<sup>148</sup>, Matthew W Fittall<sup>64</sup>, Dale W Garsed<sup>187,188</sup>, Moritz Gerstung<sup>7,8</sup>, Gad Getz<sup>3,4,5,6</sup>, Santiago Gonzalez<sup>7,8</sup>, Gavin Ha<sup>3</sup>, Kerstin Haase<sup>64</sup>, Marcin Imielinski<sup>299,300</sup>, Lara Jerman<sup>8,379</sup>, Yuan Ji<sup>380,381</sup>, Clemency Jolly<sup>64</sup>, Kortine Kleinheinz<sup>52,54</sup>, Juhee Lee<sup>382</sup>, Henry Lee-Six<sup>2</sup>, Ignaty Leshchiner<sup>3</sup>, Dimitri Livitz<sup>3</sup>, Geoff Macintyre<sup>294</sup>, Salem Malikic<sup>151,159</sup>, Florian Markowetz<sup>294,295</sup>, Iñigo Martincorena<sup>2</sup>, Thomas J Mitchell<sup>2,295,383</sup>, Quaid D Morris<sup>358,384</sup>, Ville Mustonen<sup>320,321,322</sup>, Layla Oesper<sup>385</sup>, Martin Peifer<sup>377</sup>, Myron Peto<sup>386</sup>, Benjamin J Raphael<sup>120</sup>, Daniel Rosebrock<sup>3</sup>, Yulia Rubanova<sup>160,358</sup>, S Cenk Sahinalp<sup>151,158,159</sup>, Adriana Salcedo<sup>9</sup>, Matthias Schlesner<sup>52,110</sup>, Steven E Schumacher<sup>3,217</sup>, Subhajit Sengupta<sup>387</sup>, Ruian Shi<sup>384</sup>, Seung Jun Shin<sup>264</sup>, **Paul T Spellman**<sup>#388</sup>, Oliver Spiro<sup>3</sup>, Lincoln D Stein<sup>9,10</sup>, Maxime Tarabichi<sup>2,64</sup>, **Peter Van Loo**<sup>#63,64</sup>, Shankar Vembu<sup>384,389</sup>, Ignacio Vázquez-García<sup>2,167,327,328</sup>, Wenyi Wang<sup>148</sup>, **David C Wedge**<sup>#2,354,355</sup>, David A Wheeler<sup>164,165</sup>, Jeffrey A Wintersinger<sup>192,358,390</sup>, Tsun-Po Yang<sup>377</sup>, Xiaotong Yao<sup>299,316</sup>, Kaixian Yu<sup>391</sup>, Ke Yuan<sup>294,369,372</sup> and Hongtu Zhu<sup>392,393</sup>

## Exploratory: portals, visualization and software infrastructure

Fatima Al-Shahrour<sup>357</sup>, Elisabet Barrera<sup>7</sup>, Wojciech Bazant<sup>7</sup>, Alvis Brazma<sup>7</sup>, Isidro Cortés-Ciriano<sup>237,238,239</sup>, Brian Craft<sup>240</sup>, David Craft<sup>3</sup>, Vincent Ferretti<sup>45,69</sup>, Nuno A Fonseca<sup>7,70</sup>, Anja Füllgrabe<sup>7</sup>, Mary J Goldman<sup>240</sup>, **David Haussler**#<sup>240,394</sup>, Wolfgang Huber<sup>8</sup>, Maria Keays<sup>7</sup>, Alfonso Muñoz<sup>7</sup>, Brian D O'Connor<sup>45,50</sup>, Irene Papatheodorou<sup>7</sup>, Robert Petryszak<sup>7</sup>, Elena Piñeiro-Yáñez<sup>357</sup>, Alfonso Valencia<sup>105,111</sup>, **Miguel Vazquez**#<sup>105,112</sup>, John N Weinstein<sup>395,396</sup>, Qian Xiang<sup>116</sup>, Junjun Zhang<sup>45</sup> and Jingchun Zhu#<sup>240</sup>

## Exploratory: mitochondrial variants and HLA/immunogenicity

Peter J Campbell<sup>1,2</sup>, Yiwen Chen<sup>148</sup>, Chad J Creighton<sup>241</sup>, Li Ding<sup>138,139,146</sup>, Akihiro Fujimoto<sup>48</sup>, Masashi Fujita<sup>48</sup>, Gad Getz<sup>3,4,5,6</sup>, Leng Han<sup>231</sup>, Takanori Hasegawa<sup>87</sup>, Shuto Hayashi<sup>87</sup>, Seiya Imoto<sup>86,87</sup>, Young Seok Ju<sup>2,181</sup>, Hyung-Lae Kim<sup>27</sup>, Youngwook Kim<sup>96,97</sup>, Youngil Koh<sup>307,308</sup>, Mitsuhiro Komura<sup>87</sup>, Jun Li<sup>148</sup>, **Han Liang**#<sup>397</sup>, Iñigo Martincorena<sup>2</sup>, Satoru Miyano<sup>87</sup>, Shinichi Mizuno<sup>398</sup>, **Hidewaki Nakagawa**#<sup>48</sup>, Keunchil Park<sup>206,207</sup>, Eigo Shimizu<sup>87</sup>, Yumeng Wang<sup>148,399</sup>, John N Weinstein<sup>395,396</sup>, Yanxun Xu<sup>400</sup>, Rui Yamaguchi<sup>87</sup>, Fan Yang<sup>384</sup>, Yang Yang<sup>231</sup>, Christopher J Yoon<sup>181</sup>, Sung-Soo Yoon<sup>308</sup>, Yuan Yuan<sup>148</sup>, Fan Zhang<sup>246</sup> and Zemin Zhang<sup>246,271</sup>

## Exploratory: pathogens

Malik Alawi<sup>401,402</sup>, Ivan Borozan<sup>9</sup>, Daniel S Brewer<sup>403,404</sup>, Colin S Cooper<sup>404,405,406</sup>, Nikita Desai<sup>45</sup>, **Roland Eils**#<sup>52,54,66,67</sup>, Vincent Ferretti<sup>45,69</sup>, Adam Grundhoff<sup>401,407</sup>, Murat Iskar<sup>408</sup>, Kortine Kleinheinz<sup>52,54</sup>, Peter Lichter<sup>408</sup>, **Hidewaki Nakagawa**#<sup>48</sup>, Akinyemi I Ojesina<sup>255,256,257</sup>, Chandra Sekhar Pedomallu<sup>3,6,172</sup>, Matthias Schlesner<sup>52,110</sup>, Xiaoping Su<sup>144</sup> and Marc Zapatka<sup>408</sup>

## Tumor Specific Providers – Australia (Ovarian cancer)

Kathryn Alsop<sup>409,410</sup>, Australian Ovarian Cancer Study Group<sup>187,311,411</sup>, **David D L Bowtell**#<sup>187,291</sup>, Timothy JC Bruxner<sup>185</sup>, Angelika N Christ<sup>185</sup>, Elizabeth L Christie<sup>187</sup>, Stephen M Cordner<sup>412</sup>, Prue A Cowin<sup>187</sup>, Ronny Drapkin<sup>413</sup>, Dariush Etemadmoghadam<sup>187,188</sup>, Sian Fereday<sup>414</sup>, Dale W Garsed<sup>187,188</sup>, Joshy George<sup>170</sup>, Sean M Grimmond<sup>363</sup>, Anne Hamilton<sup>187</sup>, Oliver Holmes<sup>311,312</sup>, Jillian A Hung<sup>415,416</sup>, Karin S Kassahn<sup>185,417</sup>, Stephen H Kazakoff<sup>311,312</sup>, Catherine J Kennedy<sup>418,419</sup>, Conrad R Leonard<sup>311,312</sup>, Linda Mileshkin<sup>187</sup>, David K Miller<sup>185,360,420</sup>, Gisela Mir Arnau<sup>187</sup>, Chris Mitchell<sup>187</sup>, Felicity Newell<sup>311,312</sup>, Katia Nones<sup>311,312</sup>, Ann-Marie Patch<sup>311,312</sup>, John V Pearson<sup>311,312</sup>, Michael C Quinn<sup>311,312</sup>, Mark Shackleton<sup>188,218</sup>, Darrin F Taylor<sup>185</sup>, Heather Thorne<sup>187</sup>, Nadia Traficante<sup>187</sup>, Ravikiran Vedururu<sup>187</sup>, Nick M Waddell<sup>312</sup>, Nicola Waddell<sup>311,312</sup>, Paul M Waring<sup>253</sup>, Scott Wood<sup>311,312</sup>, Qinying Xu<sup>311,312</sup> and Anna deFazio<sup>421,422,423</sup>

## Tumor Specific Providers – Australia (Pancreatic cancer)

Matthew J Anderson<sup>185</sup>, Davide Antonello<sup>424</sup>, Andrew P Barbour<sup>425,426</sup>, Claudio Bassi<sup>424</sup>, Samantha Bersani<sup>427</sup>, **Andrew V Biankin**<sup>#359,360,361,362</sup>, Timothy JC Bruxner<sup>185</sup>, Ivana Cataldo<sup>427,428</sup>, David K Chang<sup>360,362</sup>, Lorraine A Chantrill<sup>360</sup>, Yoke-Eng Chiew<sup>421</sup>, Angela Chou<sup>360,429</sup>, Angelika N Christ<sup>185</sup>, Sara Cingarlini<sup>37</sup>, Nicole Cloonan<sup>430</sup>, Vincenzo Corbo<sup>428,431, 432</sup>, Fraser R Duthie<sup>433,434</sup>, J Lynn Fink<sup>105,185</sup>, Anthony J Gill<sup>360,435</sup>, Janet S Graham<sup>362,436</sup>, **Sean M Grimmond**<sup>#363</sup>, Ivon Harliwong<sup>185</sup>, Oliver Holmes<sup>311,312</sup>, Nigel B Jamieson<sup>361,362,437</sup>, Amber L Johns<sup>360,420</sup>, Karin S Kassahn<sup>185,417</sup>, Stephen H Kazakoff<sup>311,312</sup>, James G Kench<sup>360,435,438</sup>, Luca Landoni<sup>424</sup>, Rita T Lawlor<sup>428</sup>, Conrad R Leonard<sup>311,312</sup>, Andrea Mafficini<sup>428</sup>, Neil D Merrett<sup>424,439</sup>, David K Miller<sup>185,360,420</sup>, Marco Miotto<sup>424</sup>, Elizabeth A Musgrove<sup>362</sup>, Adnan M Nagrial<sup>360</sup>, Felicity Newell<sup>311,312</sup>, Katia Nones<sup>311,312</sup>, Karin A Oien<sup>253,440</sup>, Marina Pajic<sup>360</sup>, Ann-Marie Patch<sup>311,312</sup>, John V Pearson<sup>311,312</sup>, Mark Pinese<sup>360</sup>, Andrea V Pinho<sup>360</sup>, Michael C Quinn<sup>311,312</sup>, Alan J Robertson<sup>185</sup>, Ilse Rooman<sup>360</sup>, Borislav C Rusev<sup>428</sup>, Jaswinder S Samra<sup>424,435</sup>, Maria Scardoni<sup>427</sup>, Christopher J Scarlett<sup>360,441</sup>, Aldo Scarpa<sup>428</sup>, Elisabetta Sereni<sup>424</sup>, Katarzyna O Sikora<sup>428</sup>, Michele Simbolo<sup>431</sup>, Morgan L Taschuk<sup>45</sup>, Christopher W Toon<sup>360</sup>, Giampaolo Tortora<sup>37,38</sup>, Caterina Vicentini<sup>428</sup>, Nick M Waddell<sup>312</sup>, Nicola Waddell<sup>311,312</sup>, Scott Wood<sup>311,312</sup>, Jianmin Wu<sup>360</sup>, Qinying Xu<sup>311,312</sup> and Nikolajs Zeps<sup>442</sup>

## Tumor Specific Providers – Australia (Skin cancer)

Lauri A Aaltonen<sup>443</sup>, Andreas Behren<sup>444</sup>, Hazel Burke<sup>445</sup>, Jonathan Cebon<sup>444</sup>, Rebecca A Dagg<sup>446</sup>, Ricardo De Paoli-Iseppi<sup>447</sup>, Ken Dutton-Regester<sup>311</sup>, Matthew A Field<sup>448</sup>, Anna Fitzgerald<sup>449</sup>, Sean M Grimmond<sup>363</sup>, **Nicholas K Hayward**<sup>#311,445</sup>, Peter Hersey<sup>445</sup>, Oliver Holmes<sup>311,312</sup>, Valerie Jakrot<sup>445</sup>, Peter A Johansson<sup>311</sup>, Hojabr Kakavand<sup>447</sup>, Stephen H Kazakoff<sup>311,312</sup>, Richard F Kefford<sup>450</sup>, Loretta MS Lau<sup>451</sup>, Conrad R Leonard<sup>311,312</sup>, Georgina V Long<sup>452</sup>, **Graham J Mann**<sup>#453,454</sup>, Felicity Newell<sup>311,312</sup>, Katia Nones<sup>311,312</sup>, Ann-Marie Patch<sup>311,312</sup>, John V Pearson<sup>311,312</sup>, Hilda A Pickett<sup>451</sup>, Antonia L Pritchard<sup>311</sup>, Guliotta M Pupo<sup>455</sup>, Robyn PM Saw<sup>452</sup>, Sarah-Jane Schramm<sup>456</sup>, **Richard A Scolyer**<sup>#422,452,457,458</sup>, Mark Shackleton<sup>188,218</sup>, Catherine A Shang<sup>459</sup>, Ping Shang<sup>452</sup>, Andrew J Spillane<sup>452</sup>, Jonathan R Stretch<sup>452</sup>, Varsha Tembe<sup>456</sup>, John F Thompson<sup>452</sup>, Ricardo E Vilain<sup>457</sup>, Nick M Waddell<sup>312</sup>, Nicola Waddell<sup>311,312</sup>, James S Wilmott<sup>452</sup>, Scott Wood<sup>311,312</sup>, Qinying Xu<sup>311,312</sup> and Jean Y Yang<sup>460</sup>

## Tumor Specific Providers – Canada (Pancreatic cancer)

John Bartlett<sup>461,462</sup>, Prashant Bavi<sup>463</sup>, Ivan Borozan<sup>9</sup>, Dianne E Chadwick<sup>464</sup>, Michelle Chan-Seng-Yue<sup>463</sup>, Sean Cleary<sup>463,465</sup>, Ashton A Connor<sup>466,467</sup>, Karolina Czajka<sup>468</sup>, Robert E Denroche<sup>463</sup>, Neesha C Dhani<sup>469</sup>, Jenna Eagles<sup>79</sup>, Vincent Ferretti<sup>45,69</sup>, Steven Gallinger<sup>463,466,467</sup>, Robert C Grant<sup>463,470</sup>, David Hedley<sup>469</sup>, Michael A Hollingsworth<sup>471</sup>, **Thomas J Hudson**<sup>#78,79</sup>, Gun Ho Jang<sup>463</sup>, Jeremy Johns<sup>79</sup>, Sangeetha Kalimuthu<sup>463</sup>, Sheng-Ben Liang<sup>472</sup>, Ilinca Lungu<sup>463,473</sup>, Xuemei Luo<sup>9</sup>, Faridah Mbabaali<sup>79</sup>, **John D McPherson**<sup>#79,463,474</sup>, Treasa A McPherson<sup>470</sup>, Jessica K Miller<sup>79</sup>, Malcolm J Moore<sup>469</sup>, Faiyaz Notta<sup>463,475</sup>, Danielle Pasternack<sup>79</sup>, Gloria M Petersen<sup>476</sup>, Michael H A Roehrl<sup>133,463,477,478,479</sup>, Michelle Sam<sup>79</sup>, Iris Selander<sup>470</sup>, Stefano Serra<sup>253</sup>, Sagedeh Shahabi<sup>472</sup>, **Lincoln D Stein**<sup>#9,10</sup>, Morgan L Taschuk<sup>45</sup>, Sarah P Thayer<sup>106</sup>, Lee E Timms<sup>79</sup>, Gavin W Wilson<sup>9,463</sup>, Julie M Wilson<sup>463</sup> and Bradly G Wouters<sup>480</sup>



## Tumor Specific Providers – Canada (Prostate cancer)

Timothy A Beck<sup>45</sup>, Vinayak Bhandari<sup>9</sup>, Paul C Boutros<sup>9,133,142,143</sup>, **Robert G Bristow#**<sup>133,481,482,483,484</sup>, Colin C Collins<sup>151</sup>, Shadrielle MG Espiritu<sup>9</sup>, Neil E Fleshner<sup>485</sup>, Natalie S Fox<sup>9</sup>, Michael Fraser<sup>9</sup>, Syed Haider<sup>9</sup>, Lawrence E Heisler<sup>486</sup>, Vincent Huang<sup>9</sup>, Emilie Lalonde<sup>9</sup>, Julie Livingstone<sup>9</sup>, John D McPherson<sup>79,463,474</sup>, Alice Meng<sup>487</sup>, Veronica Y Sabelnykova<sup>9</sup>, Adriana Salcedo<sup>9</sup>, Yu-Jia Shiah<sup>9</sup>, Theodorus Van der Kwast<sup>488</sup> and Takafumi N Yamaguchi<sup>9</sup>

## Tumor Specific Providers – China (Gastric cancer)

Shuai Ding<sup>489</sup>, Daiming Fan<sup>490</sup>, Yong Hou<sup>39,249</sup>, Yi Huang<sup>153,154</sup>, Lin Li<sup>39</sup>, Siliang Li<sup>39,249</sup>, Dongbing Liu<sup>39,249</sup>, Xingmin Liu<sup>39,249</sup>, **Youyong Lu#**<sup>28,29,30</sup>, Yongzhan Nie<sup>490,491</sup>, Hong Su<sup>39,249</sup>, Jian Wang<sup>39</sup>, Kui Wu<sup>39,249</sup>, Xiao Xiao<sup>154</sup>, Rui Xing<sup>29,492</sup>, **Huanming Yang#**<sup>39</sup>, Shanlin Yang<sup>489</sup>, Yingyan Yu<sup>493, 230</sup>, Xiuqing Zhang<sup>39</sup>, Yong Zhou<sup>39</sup> and Shida Zhu<sup>39,249</sup>

## Tumor Specific Providers – EU: France (Renal cancer)

Rosamonde E Banks<sup>494</sup>, Guillaume Bourque<sup>495,496</sup>, Alvis Brazma<sup>7</sup>, Paul Brennan<sup>497</sup>, **Mark Lathrop#**<sup>496</sup>, Louis Letourneau<sup>498</sup>, Yasser Riazalhosseini<sup>496</sup>, Ghislaine Scelo<sup>497</sup>, **Jörg Tost#**<sup>499</sup>, Naveen Vasudev<sup>500</sup> and Juris Viksna<sup>501</sup>

## Tumor Specific Providers – EU: United Kingdom (Breast cancer)

Sung-Min Ahn<sup>502</sup>, Ludmil B Alexandrov<sup>2,317</sup>, Samuel Aparicio<sup>503</sup>, Laurent Arnould<sup>504</sup>, MR Aure<sup>505</sup>, Shriram G Bhosle<sup>2</sup>, E Birney<sup>7</sup>, Ake Borg<sup>506</sup>, S Boyault<sup>507</sup>, AB Brinkman<sup>508</sup>, JE Brock<sup>509</sup>, A Broeks<sup>510</sup>, Adam P Butler<sup>2</sup>, AL Børresen-Dale<sup>505</sup>, C Caldas<sup>511,512</sup>, Peter J Campbell<sup>1,2</sup>, Suet-Feung Chin<sup>511,512</sup>, Helen Davies<sup>2</sup>, C Desmedt<sup>513</sup>, L Dirix<sup>514</sup>, S Dronov<sup>2</sup>, Anna Ehinger<sup>515</sup>, JE Eyfjord<sup>516</sup>, GG Van den Eynden<sup>517</sup>, A Fatima<sup>217</sup>, Jorge Reis Filho<sup>518</sup>, JA Foekens<sup>519</sup>, PA Futreal<sup>520</sup>, Øystein Garred<sup>521,522</sup>, Moritz Gerstung<sup>7,8</sup>, Dilip D Giri<sup>518</sup>, D Glodzik<sup>2</sup>, Dorte Grabau<sup>523</sup>, Holmfridur Hilmarisdottir<sup>516</sup>, GK Hooijer<sup>524</sup>, Jocelyne Jacquemier<sup>525</sup>, SJ Jang<sup>526</sup>, Jon G Jonasson<sup>516</sup>, Jos Jonkers<sup>527</sup>, HY Kim<sup>525</sup>, Tari A King<sup>528,529</sup>, Stian Knappskog<sup>2</sup>, G Kong<sup>525</sup>, S Krishnamurthy<sup>530</sup>, S Van Laere<sup>514</sup>, SR Lakhani<sup>531</sup>, A Langerød<sup>505</sup>, Denis Larsimont<sup>532</sup>, HJ Lee<sup>526</sup>, JY Lee<sup>533</sup>, Ming Ta Michael Lee<sup>520</sup>, Yilong Li<sup>2</sup>, Ole Christian Lingjærde<sup>534</sup>, Gaetan MacGrogan<sup>535</sup>, JW Martens<sup>536</sup>, Sancha Martin<sup>2,369</sup>, Iñigo Martincorena<sup>2</sup>, Andrew Menzies<sup>2</sup>, Sandro Morganella<sup>2</sup>, Ville Mustonen<sup>320,321,322</sup>, Serena Nik-Zainal<sup>2,324,325,326</sup>, Sarah O'Meara<sup>2</sup>, I Pauporté<sup>18</sup>, Sarah Pinder<sup>537</sup>, X Pivot<sup>538</sup>, Elena Provenzano<sup>539</sup>, CA Purdie<sup>540</sup>, Keiran M Raine<sup>2</sup>, M Ramakrishna<sup>2</sup>, K Ramakrishnan<sup>2</sup>, AL Richardson<sup>217</sup>, M Ringnér<sup>506</sup>, Javier Bartolomé Rodríguez<sup>105</sup>, FG Rodríguez-González<sup>175</sup>, G Romieu<sup>541</sup>, Roberto Salgado<sup>253</sup>, Torill Sauer<sup>534</sup>, R Shepherd<sup>2</sup>, AM Sieuwerts<sup>177</sup>, PT Simpson<sup>531</sup>, M Smid<sup>542</sup>, C Sotiriou<sup>55</sup>, PN Span<sup>543</sup>, J Staaf<sup>506</sup>, Lucy Stebbings<sup>2</sup>, Ólafur Andri Stefánsson<sup>544</sup>, Alasdair Stenhouse<sup>545</sup>, **Michael Rudolf Stratton#**<sup>2</sup>, HG Stunnenberg<sup>249,546</sup>, Fred Sweep<sup>547</sup>, BK Tan<sup>548</sup>, Jon W

Teague<sup>2</sup>, Gilles Thomas<sup>549</sup>, AM Thompson<sup>545</sup>, S Tommasi<sup>550</sup>, I Treilleux<sup>551,552</sup>, Andrew Tutt<sup>217</sup>, NT Ueno<sup>393</sup>, Peter Van Looy<sup>63,64</sup>, P Vermeulen<sup>514</sup>, Alain Viari<sup>428</sup>, MJ van de Vijver<sup>253</sup>, A Vincent-Salomon<sup>546</sup>, David C Wedge<sup>2,354,355</sup>, Bernice Huimin Wong<sup>553</sup>, Lucy Yates<sup>2</sup>, X Zou<sup>2</sup>, CHM van Deurzen<sup>536</sup> and L van't Veer<sup>554,555</sup>

## Tumor Specific Providers – Germany (Malignant lymphoma)

Ole Ammerpohl<sup>556,557</sup>, Sietse Aukema<sup>558,559</sup>, Anke K Bergmann<sup>560</sup>, Stephan H Bernhart<sup>276,277,281</sup>, Hans Binder<sup>276,277</sup>, Arndt Borkhardt<sup>561</sup>, Christoph Borst<sup>562</sup>, Benedikt Brors<sup>82,119,278</sup>, Birgit Burkhardt<sup>563</sup>, Alexander Claviez<sup>564</sup>, Roland Eils<sup>52,54,66,67</sup>, Maria Elisabeth Goebler<sup>565</sup>, Andrea Haake<sup>556</sup>, Siegfried Haas<sup>562</sup>, Martin Hansmann<sup>566</sup>, Jessica I Hoell<sup>561</sup>, Steve Hoffmann<sup>277,279,280,281</sup>, Michael Hummel<sup>567</sup>, Daniel Hübschmann<sup>54,66,83,84,85</sup>, Dennis Karsch<sup>568</sup>, Wolfram Klapper<sup>559</sup>, Kortine Kleinheinz<sup>52,54</sup>, Michael Kneba<sup>568</sup>, Jan O Korbel<sup>7,8</sup>, Helene Kretzmer<sup>277,281</sup>, Markus Kreuz<sup>569</sup>, Dieter Kube<sup>570</sup>, Ralf Küppers<sup>571</sup>, Chris Lawerenz<sup>67</sup>, Dido Lenze<sup>567</sup>, Peter Lichter<sup>408</sup>, Markus Loeffler<sup>569</sup>, Cristina López<sup>262,556</sup>, Luisa Mantovani-Löffler<sup>572</sup>, Peter Möller<sup>573</sup>, German Ott<sup>574</sup>, Bernhard Radlwimmer<sup>408</sup>, Julia Richter<sup>556,559</sup>, Marius Rohde<sup>575</sup>, Philip C Rosenstiel<sup>576</sup>, Andreas Rosenwald<sup>577</sup>, Markus B Schilhabel<sup>576</sup>, Matthias Schlesner<sup>52,110</sup>, Stefan Schreiber<sup>578</sup>, **Reiner Siebert#**<sup>261,262</sup>, Peter F Stadler<sup>276,277,281</sup>, Peter Staib<sup>579</sup>, Stephan Stilgenbauer<sup>580</sup>, Stephanie Sungalee<sup>8</sup>, Monika Szczepanowski<sup>559</sup>, Umut H Toprak<sup>54,581</sup>, Lorenz HP Trümper<sup>570</sup>, Rabea Wagener<sup>262,556</sup> and Thorsten Zenz<sup>82</sup>

## Tumor Specific Providers – Germany (Pediatric Brain cancer)

Ivo Buchhalter<sup>52,53,54</sup>, Juergen Eils<sup>66,67</sup>, Roland Eils<sup>52,54,66,67</sup>, Volker Hovestadt<sup>408</sup>, Barbara Hutter<sup>80,81,82</sup>, David TW Jones<sup>301,302</sup>, Natalie Jäger<sup>52</sup>, Christof von Kalle<sup>84</sup>, Marcel Kool<sup>98,301</sup>, Jan O Korbel<sup>7,8</sup>, Andrey Korshunov<sup>98</sup>, Pablo Landgraf<sup>582</sup>, Chris Lawerenz<sup>67</sup>, Hans Lehrach<sup>583</sup>, **Peter Lichter#**<sup>408</sup>, Paul A Northcott<sup>584</sup>, Stefan M Pfister<sup>98,301,585</sup>, Bernhard Radlwimmer<sup>408</sup>, Guido Reifenberger<sup>582</sup>, Matthias Schlesner<sup>52,110</sup>, Hans-Jörg Warnatz<sup>583</sup>, Joachim Weischenfeldt<sup>8,113,114</sup>, Stephan Wolf<sup>586</sup>, Marie-Laure Yaspo<sup>583</sup> and Marc Zapatka<sup>408</sup>

## Tumor Specific Providers – Germany (Prostate cancer)

Yassen Assenov<sup>587</sup>, Benedikt Brors<sup>82,119,278</sup>, Juergen Eils<sup>66,67</sup>, Roland Eils<sup>52,54,66,67</sup>, Lars Feuerbach<sup>119</sup>, Clarissa Gerhauser<sup>285</sup>, Jan O Korbel<sup>7,8</sup>, Chris Lawerenz<sup>67</sup>, Hans Lehrach<sup>583</sup>, Sarah Minner<sup>588</sup>, Christoph Plass<sup>285</sup>, **Guido Sauter#**<sup>589</sup>, Thorsten Schlomm<sup>114,590</sup>, Nikos Sidiropoulos<sup>113</sup>, Ronald Simon<sup>589</sup>, **Holger Sültmann#**<sup>82,591</sup>, Hans-Jörg Warnatz<sup>583</sup>, Dieter Weichenhan<sup>285</sup>, Joachim Weischenfeldt<sup>8,113,114</sup> and Marie-Laure Yaspo<sup>583</sup>

## Tumor Specific Providers – India (Oral cancer)

Nidhan K Biswas<sup>592</sup>, Luca Landoni<sup>424</sup>, Arindam Maitra<sup>592</sup>, **Partha P Majumder#**<sup>592</sup> and **Rajiv**

Sarin#<sup>593</sup>

## Tumor Specific Providers – Italy (Pancreatic cancer)

Davide Antonello<sup>424</sup>, Stefano Barbi<sup>431</sup>, Claudio Bassi<sup>424</sup>, Samantha Bersani<sup>427</sup>, Giada Bonizzato<sup>428</sup>, Cinzia Cantù<sup>428</sup>, Ivana Cataldo<sup>427,428</sup>, Sara Cingarlini<sup>37</sup>, Vincenzo Corbo<sup>428,431, 432</sup>, Angelo P Dei Tos<sup>594</sup>, Matteo Fassan<sup>595</sup>, Sonia Grimaldi<sup>428</sup>, Luca Landoni<sup>424</sup>, Rita T Lawlor<sup>428</sup>, Claudio Luchini<sup>427</sup>, Andrea Mafficini<sup>428</sup>, Giuseppe Malleo<sup>424</sup>, Giovanni Marchegiani<sup>424</sup>, Michele Milella<sup>37</sup>, Marco Miotto<sup>424</sup>, Salvatore Paiella<sup>424</sup>, Antonio Pea<sup>424</sup>, Paolo Pederzoli<sup>424</sup>, Borislav C Rusev<sup>428</sup>, Andrea Ruzzenente<sup>424</sup>, Roberto Salvia<sup>424</sup>, Maria Scardoni<sup>427</sup>, **Aldo Scarpa#**<sup>428</sup>, Elisabetta Sereni<sup>424</sup>, Michele Simbolo<sup>431</sup>, Nicola Sperandio<sup>428</sup>, Giampaolo Tortora<sup>37,38</sup> and Caterina Vicentini<sup>428</sup>

## Tumor Specific Providers – Japan (Biliary tract cancer)

Yasuhito Arai<sup>33</sup>, Natsuko Hama<sup>33</sup>, Nobuyoshi Hiraoka<sup>596</sup>, Fumie Hosoda<sup>33,597</sup>, Mamoru Kato<sup>366</sup>, Hiromi Nakamura<sup>33</sup>, Hidenori Ojima<sup>598</sup>, Takuji Okusaka<sup>599</sup>, **Tatsuhiko Shibata#**<sup>33,34</sup>, Yasushi Totoki<sup>33</sup> and Tomoko Urushidate<sup>34</sup>

## Tumor Specific Providers – Japan (Gastric cancer)

**Hiroyuki Aburatani#**<sup>272</sup>, Yasuhito Arai<sup>33</sup>, Masashi Fukayama<sup>600</sup>, Natsuko Hama<sup>33</sup>, Fumie Hosoda<sup>33,597</sup>, Shumpei Ishikawa<sup>601</sup>, Hitoshi Katai<sup>602</sup>, Mamoru Kato<sup>366</sup>, Hiroto Katoh<sup>603</sup>, Daisuke Komura<sup>601</sup>, Genta Nagae<sup>272,284</sup>, Hiromi Nakamura<sup>33</sup>, Hirofumi Rokutan<sup>604</sup>, Mihoko Saito-Adachi<sup>33</sup>, **Tatsuhiko Shibata#**<sup>33,34</sup>, Akihiro Suzuki<sup>272,605</sup>, Hirokazu Taniguchi<sup>606</sup>, Kenji Tatsuno<sup>272</sup>, Yasushi Totoki<sup>33</sup>, Tetsuo Ushiku<sup>600</sup>, Shinichi Yachida<sup>33,607</sup> and Shogo Yamamoto<sup>272</sup>

## Tumor Specific Providers – Japan (Liver cancer)

Hiroyuki Aburatani<sup>272</sup>, Hiroshi Aikata<sup>608</sup>, Koji Arihiro<sup>608</sup>, Shun-ichi Ariizumi<sup>609</sup>, Keith A Boroevich<sup>47,48</sup>, Kazuaki Chayama<sup>608</sup>, Akihiro Fujimoto<sup>48</sup>, Masashi Fujita<sup>48</sup>, Mayuko Furuta<sup>48</sup>, Kunihito Gotoh<sup>610</sup>, Natsuko Hama<sup>33</sup>, Takanori Hasegawa<sup>87</sup>, Shinya Hayami<sup>611</sup>, Shuto Hayashi<sup>87</sup>, Satoshi Hirano<sup>612</sup>, Seiya Imoto<sup>86,87</sup>, Mamoru Kato<sup>366</sup>, Yoshiiku Kawakami<sup>608</sup>, Kazuhiro Maejima<sup>48</sup>, Satoru Miyano<sup>87</sup>, Genta Nagae<sup>272,284</sup>, **Hidewaki Nakagawa#**<sup>48</sup>, Hiromi Nakamura<sup>33</sup>, Toru Nakamura<sup>612</sup>, Kaoru Nakano<sup>48</sup>, Hideki Ohdan<sup>608</sup>, Aya Sasaki-Oku<sup>48</sup>, **Tatsuhiko Shibata#**<sup>33,34</sup>, Yuichi Shiraishi<sup>87</sup>, Hiroko Tanaka<sup>87</sup>, Yasushi Totoki<sup>33</sup>, Tatsuhiko Tsunoda<sup>47,220,221,222</sup>, Masaki Ueno<sup>611</sup>, Rui Yamaguchi<sup>87</sup>, Masakazu Yamamoto<sup>609</sup> and Hiroki Yamaue<sup>611</sup>

## Tumor Specific Providers – Singapore (Biliary tract cancer)

Su Pin Choo<sup>613</sup>, Ioana Cutcutache<sup>267,319</sup>, Narong Khuntikeo<sup>424,614</sup>, John R McPherson<sup>267,319</sup>, Choon

Kiat Ong<sup>615</sup>, Chawalit Pairojkul<sup>253</sup>, Irinel Popescu<sup>616</sup>, **Steven G Rozen#**<sup>267,268,319</sup>, **Patrick Tan#**<sup>254,266,267,268</sup> and **Bin Tean Teh#**<sup>266,267,268,269,270</sup>

## **Tumor Specific Providers – South Korea (Blood cancer)**

Keun Soo Ahn<sup>617</sup>, Hyung-Lae Kim<sup>27</sup>, Youngil Koh<sup>307,308</sup> and **Sung-Soo Yoon#**<sup>308</sup>

## **Tumor Specific Providers – Spain (Chronic Lymphocytic Leukemia)**

Marta Aymerich<sup>618</sup>, **Elias Campo#**<sup>619,620</sup>, Josep Ll Gelpi<sup>46,71</sup>, Ivo G Gut<sup>135,136</sup>, Marta Gut<sup>135,136</sup>, Armando Lopez-Guillermo<sup>621</sup>, Carlos López-Otín<sup>622</sup>, Xose S Puentes<sup>623</sup>, Romina Royo<sup>105</sup> and David Torrents<sup>105,111</sup>

## **Tumor Specific Providers – United Kingdom (Bone cancer)**

Fernanda Amary<sup>624</sup>, Daniel Baumhoer<sup>625</sup>, Sam Behjati<sup>2</sup>, Bodil Bjerkehagen<sup>626</sup>, **Peter J Campbell#**<sup>1,2</sup>, **Adrienne M Flanagan#**<sup>627</sup>, PA Futreal<sup>520</sup>, Ola Myklebost<sup>628</sup>, Nischalan Pillay<sup>629</sup>, Patrick Tarpey<sup>630</sup>, Roberto Tirabosco<sup>631</sup> and Olga Zaikova<sup>632</sup>

## **Tumor Specific Providers – United Kingdom (Chronic myeloid disorders)**

Jacqueline Boulton<sup>633</sup>, David T Bowen<sup>2</sup>, Adam P Butler<sup>2</sup>, **Peter J Campbell#**<sup>1,2</sup>, Mario Cazzola<sup>634</sup>, Carlo Gambacorti-Passerini<sup>186</sup>, Anthony R Green<sup>295</sup>, Eva Hellstrom-Lindberg<sup>635</sup>, Luca Malcovati<sup>634</sup>, Sancha Martin<sup>2,369</sup>, Jyoti Nangalia<sup>636</sup>, Elli Papaemmanuil<sup>2</sup> and Paresh Vyas<sup>311,637</sup>

## **Tumor Specific Providers – United Kingdom (Esophageal cancer)**

Yeng Ang<sup>638</sup>, Hugh Barr<sup>639</sup>, Duncan Beardsmore<sup>640</sup>, Matthew Eldridge<sup>294</sup>, **Rebecca C Fitzgerald#**<sup>325</sup>, James Gossage<sup>641</sup>, Nicola Grehan<sup>325</sup>, George B Hanna<sup>642</sup>, Stephen J Hayes<sup>643,644</sup>, Ted R Hupp<sup>645</sup>, David Khoo<sup>646</sup>, Jesper Lagergren<sup>635,647</sup>, Laurence E Lovat<sup>251</sup>, Shona MacRae<sup>395</sup>, Maria O'Donovan<sup>325</sup>, J Robert O'Neill<sup>648</sup>, Simon L Parsons<sup>649</sup>, Shaun R Preston<sup>650</sup>, Sonia Puig<sup>651</sup>, Tom Roques<sup>652</sup>, Grant Sanders<sup>248</sup>, Sharmila Sothi<sup>653</sup>, Simon Tavaré<sup>294</sup>, Olga Tucker<sup>654</sup>, Richard Turkington<sup>655</sup>, Timothy J Underwood<sup>656</sup> and Ian Welch<sup>657</sup>

## **Tumor Specific Providers – United Kingdom (Prostate cancer)**

Nicholas Van As<sup>658</sup>, Daniel M Berney<sup>659</sup>, Johann S De Bono<sup>405</sup>, G Steven Bova<sup>330</sup>, Daniel S

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## Tumor Specific Providers – United States (TCGA)

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