

Publications

177. Nicholson MD, Endler L, Popa A, Genger J-W, Bock C, Michor F & Bergthaler (2021) A Response to comment on “Genomic epidemiology of superspreading events in Austria reveals mutational dynamics and transmission properties of SARS-CoV-2.” *Science Translational Medicine* **13**, eabj3222, 1-3. ([PDF](#))
176. Koh S-B, Dontchos B, Bossuyt V, Edmonds C, Cristea S, Melkonjan N, Mortensen L, Ma A, Beyerlin K, Denault E, Niehoff E, Hirz T, Sykes DB, Michor F, Specht M, Lehman C, Ellisen LW, Spring LM (2021) Systematic research specimen collection during clinical image-guided breast biopsy does not increase complications and enables high-content analyses for translational cancer research. *Npj Precision Oncology* **5**, 85, 1-7. ([PDF](#))
175. Yagi M, Ji F, Charlton J*, Cristea S*, Messemer K, Horwitz N, Stefano BD, Tsopoulidis N, Hoetker MS, Huebner AJ, Bar-Nur O, Almada AE, Yamamoto M, Patelunas A, Goldhamer DJ, Wagers AJ, Michor F, Meissner A, Sadreyev RI & Hochedlinger K (2021) Dissecting dual roles of MyoD during lineage conversion to mature myocytes and myogenic stem cells. *Genes & Development* **35**, 1209–1228. * Equal contribution. ([PDF](#))
174. Wu HJ*, Landshammer A*, Stamenova E, Bolondi A, Kretzmer H, Meissner A+, Michor F+ (2021) Topological isolation of developmental regulators in mammalian genomes. *Nature Communications* **12**, 4897, 1-19. * Equal contribution. + Co-corresponding authors. ([PDF](#))
173. Metzger Filho O*, Viale G*, Stein S*, Trippa L, Yardley DA, Mayer IA, Gupta Abramson V, Arteaga CL, Spring L, Waks AG, Wrabel E, DeMeo M, Bardia A, Dell'Orto P, Russo L, King TA, Polyak K, Michor F+, Winer EP, Krop IE+ (2021) Impact of HER2 heterogeneity on treatment response of early-stage HER2-positive breast cancer: phase II neoadjuvant trial of T-DM1 combined with pertuzumab. *Cancer Discovery* **11**, 1-14. * Equal contribution. + Co-corresponding authors. ([PDF](#))

172. Zee BM, Poels KE, Yao CH, Kawabata KC, Wu G, Duy C, Jacobus WD, Senior E, Endress JE, Jambhekar A, Lovitch SB, Ma J, Dhall A, Harris IS, Blanco MA, Sykes DB, Licht JD, Weinstock DM, Melnick A, Haigis MC, Michor F, Shi Y (2021) Combined epigenetic and metabolic treatments overcome differentiation blockade in acute myeloid leukemia. *iScience* **24**, 102651, 1-23. ([PDF](#))

171. Poels KE, Schoenfeld AJ, Makhnin A, Tobi Y, Wang Y, Frisco-Cabanos H, Chakrabarti S, Shi M, Napoli C, McDonald TO, Tan W, Hata A, Weinrich SL, Yu HA+, Michor F+ (2021) Identification of optimal dosing schedules of dacomitinib and osimertinib for a phase I/II trial in advanced EGFR-mutant non-small cell lung cancer. *Nature Communications* **12**, 3697, 1-12. + Co-corresponding authors. ([PDF](#))

170. Janiszewska M*, Stein S*, Metzger Filho O, Eng J, Kingston NL, Harper NW, Rye IH, Aleckovic M, Trinh A, Murphy KC, Marangoni E, Cristea S, Oakes B, Winer EP, Krop IE, Russness HG, Spellman PT, Bucher E, Hu Z, Chin K, Gray JW, Michor F+, Polyak K+ (2021) The impact of tumor epithelial and microenvironmental heterogeneity on treatment responses in HER2-positive breast cancer. *JCI Insights* **6**, e147617, 1-19. *Equal contribution. + Co-corresponding authors. ([PDF](#))

169. Randles A, Wirsching H-G, Dean J, Cheng Y-K, Emerson S, Pattwell SS, Holland EC*, Michor F* (2021) Computational modeling of the glioblastoma microenvironment identifies optimum temozolomide-radiotherapy administration schedules. *Nature Biomedical Engineering* **5**, 346-359. * Co-corresponding authors. ([PDF](#))

168. Minussi DC*, Nicholson MD*, Ye H*, Davis A, Wang K, Baker T, Tarabichi M, Sei E, Du H, Rabbani M, Peng C, Hu M, Bai S, Lin Y-W, Schalck A, Multani A, Ma J, McDonald TO, Casasent A, Barrera A, Chen H, Lim B, Arun B, Meric-Bernstam F, Van Loo P, Michor F+, Navin N+ (2021) Breast tumors maintain a reservoir of subclonal diversity during expansion. *Nature* **592**, 302-308. * Equal contribution. + Co-corresponding authors. ([PDF](#))

167. Engelhart D, Michor F (2021) A quantitative paradigm for decision-making in precision oncology. *Trends in Cancer* **7**, 293-300. ([PDF](#))

166. Van Egeren D*, Escabi J*, Nguyen M*, Liu S, Reilly CR, Patel S, Kamaz B, Kalyva M, DeAngelo DJ, Galinsky I, Wadleigh M, Winer ES, Luskin M, Stone RM, Garcia J, Hobbs GS, Camargo FD, Michor F, Mullally A+, Cortes-Ciriano I+, Hormoz S+ (2021) Reconstructing the lineage histories and differentiation trajectories of individual cancer cells in JAK2-mutant myeloproliferative neoplasms. *Cell Stem Cell* **28**, 514-523. * Equal contribution. + Co-corresponding authors. ([PDF](#))

165. Oki T, Mercier F, Kato H, Jung Y, McDonald O, Spencer J, Mazzola M, van Gestel N, Lin C, Michor F, Kitamura T, Scadden D (2021) Imaging dynamic mTORC1 pathway activity in vivo reveals marked shifts that support time-specific inhibitor therapy in AML. *Nature Communications* **12**, 245, 1-13. ([PDF](#))

164. Shen YJ*, Mishima Y*, Shi J*, Sklavenitis-Pistofidis R*, Redd RA, Moschetta M, Manier S, Roccaro A, Sacco A, Tai Y-T, Mercier F, Kawano Y, Su NK, Berrios B, Doench JG, Root DE, Michor F, Scadden DT, Ghobrial IM (2020) Progression signature underlies clonal evolution and dissemination of multiple myeloma. *Blood* **137**, 2360-2372. * Equal contribution. ([PDF](#))

163. Popa A*, Genger J-W*, Nicholson MD+, Penz T+, Schmid D+, Aberle SW+, Agerer B+, Lercher A+, Endler L, Colaco H, Smyth M, Schuster M, Grau ML, Martinez-Jimenez F, Pich O, Borena W, Pawelka E, Keszei Z, Senekowitsch M, Laine J, Aberle JH, Redlberger-Fritz M, Karolyi M, Zoufaly A, Maritschnik S, Borkovec M, Hufnagl P, Nairz M, Weiss G, Wolfinger MT, von Laer D, Superti-Furga G, Lopez-Bigas N, Puchhammer-Stoeckl E, Allgergerger F, Michor F, Bock C, Bergthaler A (2020) Mutational dynamics and transmission properties of SARS-CoV-2 superspreading events in Austria. *Science Translational Medicine* **12**, eabe2555, 1-13. * Equal contribution. + Equal contribution. ([PDF](#))

(

162. Irurzun-Arana I, McDonald TO, Troconiz IF, Michor F (2020) Pharmacokinetic profiles determine optimal combination treatment schedules in computational models of drug resistance. *Cancer Research* **80**, 3372-3382. ([PDF](#))

161. Chakrabarti C, Michor F (2020) Circadian clock effects on cellular proliferation: insights from theory and experiments. *Current Opinion in Cell Biology* **67**, 17-26. ([PDF](#))
160. Feiger B, Gounley J, Adler D, Leopold JA, Draeger EW, Chaudhury R, Ryan J, Pathangey G, Winarta K, Frakes D, Michor F, Randles A (2020) Accelerating massively parallel hemodynamic models of coarctation of the aorta using neural networks. *Nature Scientific Reports* **10**, 9508, 1-13. ([PDF](#))
159. Roney J*, Ferlic J*, Michor F+, McDonald TO+ (2020) ESTIpop: A computational tool to simulate and estimate parameters for continuous-time Markov branching processes. *Bioinformatics* **36**, 4372-4373. * Equal contribution. + Co-corresponding authors. ([PDF](#))
158. Shu S*, Wu H-J*, Ge JY, Zeid R, Harris IS, Jovanovic B, Murphy K, Wang B, Qiu X, Endress JE, Reyes J, Lim K, Font-Tello A, Syamala S, Xiao T, Chilamakuri CSR, Papachristou EK, D'Santos C, Anand J, Hinohara K, Li W, McDonald TO, Luoma A, Modiste RJ, Nguyen Q-D, Michel B, Cejas P, Kadoch C, Jaffe JD, Wucherpfennig KW, Qi J, Liu XS, Long H, Brown M, Carroll JS, Brugge JS, Bradner J, Michor F+, Polyak K+ (2020) Synthetic lethal and resistance interactions with BET bromodomain inhibitors in triple-negative breast cancer. *Molecular Cell* **78**, 1096-1113. * Equal contribution. + Co-corresponding authors. ([PDF](#))
157. Ge JY, Shu S, Kwon M, Jovanovic B, Murchpy K, Gulvady A, Fassel A, Trinh A, Kuang Y, Heavey GA, Luoma A, Paweletz C, Thorner AR, Wucherpfennig KW, Qi J, Brown M, Sicinski P, McDonald TO, Pellman D, Michor F*, Polyak K* (2020) Acquired resistance to combined BET and CDK4/6 inhibition. *Nature Communications* **11**, 2350, 1-17. * Co-corresponding authors. ([PDF](#))
156. Starrett JH, Guernet A, Cuomo ME, Poels K, van Alderwerelt van Rosenburgh I, Nagelberg A, Price K, Khan H, Gaefele M, Ayeni D, Stewart TF, Kuhlman A, Ashtekar KD, Kaech SM, Unni A, Homer R, Lockwood W, Michor F, Goldberg SB, Lemmon MA, Smith P, Cross D, Politi K (2020) Drug sensitivity and allele-specificity of first-line osimertinib resistance EGFR mutations. *Cancer Research* **80**, 2017-2030. ([PDF](#))

155. Murata K, Jadhav U, Madha S, van ES J, Dean J, Cavazza A, Wucherpfennig K, Michor F, Clevers H, Shivdasani RA (2020) Ablated intestinal stem cells recover predominantly by ASCL2-dependent dedifferentiation of their recent progeny. *Cell Stem Cell* **26**, 377-390. ([PDF](#))

154. Shank K, Dunbar A, Koppikar P, Kleppe M, Teruya-Feldstein J, Csete IS, Bhagwat N, Keller M, Kilpivaara O, Michor F, Levine R, De Vargas Roditi L (2019) Mathematical modeling reveals alternative JAK inhibitor treatment in myeloproliferative neoplasms. *Haematologica* **105**, 91-94. ([PDF](#))

153. Janiszewska M*, Tabassum DP*, Castano Z, Cristea S, Yamamoto KN, Kingston NL, Murphy KC, Shu S, Harper NW, Gil Del Alcazar C, Aleckovic M, Ekram MB, Cohen O, Kwak M, Qin Y, Laszewski T, Luoma A, Marusyk A, Wucherpfennig KW, Wagle N, Fan R, Michor F, McAllister S, Polyak K (2019) Subclonal cooperation drives metastasis by modulating local and systemic immune microenvironments. *Nature Cell Biology* **21**, 879-888. * Equal contribution. ([PDF](#))

152. Yamamoto KN, Liu LL, Nakamura A, Haeno H, Michor F (2019) Stochastic evolution of pancreatic cancer metastases during logistic clonal expansion. *JCO Clinical Cancer Informatics* **3**, 1-11. ([PDF](#))

151. Yamamoto KN, Nakamura A, Liu LL, Stein S, Tramontano AC, Kartoun U, Shimizu T, Inoue Y, Asakuma M, Haeno H, Kong CY, Uchiyama K, Gonen M, Hur C, Michor F (2019) Computational modeling of pancreatic cancer patients receiving FOLFIRINOX and gemcitabine-based therapies identifies optimum intervention strategies. *PLoS ONE* **14**, e0215409, 1-19. ([PDF](#))

150. Ferlic J, Shi J, McDonald TO, Michor F (2019) DIFFpop: A stochastic computational approach to simulate differentiation hierarchies with single cell barcoding. *Bioinformatics* **35**, 3849-3851. ([PDF](#))
149. Altrock PM, Ferlic J, Galla T, Tomasson M, Michor F (2018) A computational model of MGUS progression to multiple myeloma identifies optimum screening strategies and their effects on mortality. *JCO Clinical Cancer Informatics* **2**, 1-12. ([PDF](#))
148. Chakrabarti S*, Paek AL*, Reyes J, Lasick KA, Lahav G+, Michor F+ (2018) Hidden heterogeneity and circadian-controlled cell fate inferred from single cell lineages. *Nature Communications* **9**, 5372, 1-13. * Equal contribution. + Co-corresponding authors. ([PDF](#))
147. Hinohara K*, Wu H-J*, Vigneau S, McDonald TO, Igarashi KJ, Yamamoto KN, Madsen T, Fassl A, Egri SB, Papanastasiou M, Ding L, Peluffo G, Cohen O, Kales SC, Lal-Nag M, Rai G, Maloney DJ, Jadhav A, Simeonov A, Wagle N, Brown M, Meissner A, Sicinski P, Jaffe JD, Jeselsohn R, Gimelbrandt AA, Michor F+, Polyak K+ (2018) KDM5 histone demethylase activity links cellular transcriptomic heterogeneity to therapeutic resistance. *Cancer Cell* **34**, 939-953. * Equal contribution. + Co-corresponding authors. ([PDF](#))
146. McDonald TO*, Chakrabarti S*, Michor F (2018) Currently available bulk sequencing data does not necessarily support a model of neutral tumor evolution. *Nature Genetics* **50**, 1620-1623. * Equal contribution. ([PDF](#))
145. Van Egeren D, Madsen T, Michor F (2018) Fitness variation in isogenic populations leads to a novel evolutionary mechanism for crossing fitness valleys. *Communications Biology* **1**, 151, 1-9. ([PDF](#))

144. Karaayvaz M*, Cristea S*, Gillespie SM, Patel AP, Mylvaganam R, Luo CC, Specht MC, Bernstein BE, Michor F+, Ellisen LW+ (2018) Unravelling subclonal heterogeneity and aggressive disease states in TNBC through single-cell RNA-seq. Nature Communications **9**, 3588, 1-10. * Equal contribution. + Co-corresponding authors. ([PDF](#))

143. Jun HJ, Appleman VA, Wu H-J, Rose CM, Pineda JJ, Yeo AT, Delcuze B, Lee C, Gyuris A, Zhu H, Woolfenden S, Bronisz A, Nakano I, Chiocca EA, Bronson RT, Ligon KL, Sarkaria JN, Gygi SP, Michor F, Mitchison TJ, Charest A (2018) A PDGFRalpha-driven mouse model of glioblastoma reveals a stathmin1-mediated mechanism of sensitivity to vinblastine. Nature Communications **9**, 3116, 1-13. ([PDF](#))

142. Stover D, Del Alcazar CG, Brock J, Guo H, Overmoyer B, Balko J, Xu Q, Bardia A, Tolaney S, Gelman R, Lloyd M, Wang Y, Xu Y, Michor F, Wang V, Winer E, Polyak K, Lin N (2018) Phase II study of ruxolitinib, a selective JAK1/2 inhibitor, in patients with metastatic triple-negative breast cancer. NPJ Breast Cancer **4**, 10, 1-9. ([PDF](#))

141. Cimino PJ, Kim Y, Wu HJ, Alexander J, Wirsching H-G, Szulzewsky F, Pitter K, Ozawa T, Wang J, Vazquez J, Arora S, Rabadan R, Levine RL, Michor F, Holland EC (2018) Increased HOXA5 expression provides a selective advantage for gain of whole chromosome 7 in IDH-wildtype glioblastoma. Genes & Development **32**, 512-523. ([PDF](#))

140. Stein S, Zhao R, Haeno H, Vivanco I, Michor F (2018) Mathematical modeling identifies optimum lapatinib dosing schedules for the treatment of glioblastoma patients. PLoS Computational Biology **14**, e1005924, 1-24. ([PDF](#))

139. Riester M*, Xu Q*, Moreira A, Zheng J, Michor F+, Downey RD+ (2017) The Warburg effect: persistence of stem cell metabolism in cancers as a failure of differentiation. Annals of Oncology **29**, 264-270. * Equal contribution. + Co-corresponding authors. ([PDF](#))

138. Malone CF, Emerson C, Ingraham R, Barbosa W, Guerra S, Yoon H, Liu LL, Michor F, Haigis M, Macleod KF, Maertens O, Cichowski K (2017) mTOR and HDAC inhibitors converge on the TXNIP/thioredoxin pathway to cause catastrophic oxidative stress and regression of RAS-driven tumors. *Cancer Discovery* **7**, 1450-1463. ([PDF](#))

137. Smith K*, Lin LL*, Ganesan S, Michor F+, De S+ (2017) Nuclear topology modulates the mutational landscapes of cancer genomes. *Nature Structural & Molecular Biology* **24**, 1000-1006. * Equal contribution.

+ Co-corresponding authors.

(
[PDF](#)
)

136. Maruvka YE, Mouw KW, Karlic R, Parasuraman P, Kamburov A, Polak P, Haradhvala NJ, Hess JM, Rheinbay E, Brody Y, Koren A, Braunstein LZ, D'Andrea A, Lawrence MS, Bass A, Bernards A, Michor F, Getz G (2017) Analysis of somatic microsatellite indels identifies driver events in human tumors. *Nature Biotechnology* **35**, 951–959. ([PDF](#))

135. Del Alcazar CRG, Huh SJ, Ekram MB, Trinh A, Liu LL, Beca F, Zi X, Kwak M, Bergholtz H, Su Y, Ding L, Russnes HG, Richardson AL, Babski K, Kim EMH, McDonnell III CH, Wagner J, Rowberry R, Freeman GJ, Dillon D, Sorlie T, Coussens LM, Garber JE, Fan R, Bobolis K, Allred DC, Jeong J, Park SY, Michor F, Polyak K (2017) Immune escape in breast cancer during in situ to invasive carcinoma transition. *Cancer Discovery* **7**, 1098-1115. ([PDF](#))

134. Smith ZD*, Shi J*, Gu H, Dongahey J, Clement K, Cacciarelli D, Gnirke A, Michor F+, Meissner A+ (2017) Epigenetic restriction of extraembryonic lineages mirrors the somatic transition to cancer. *Nature* **549**, 543–547. * and + Equal contribution. ([PDF](#))

133. Chakrabarti S, Michor F (2017) Pharmacokinetics and drug-interactions determine optimum combination strategies in computational models of cancer evolution. *Cancer Research* **77**

, 3908-3921. (

[PDF](#)
)

132. Zhao R, Catalano PJ, DeGruttola VG, Michor F (2017) Estimating mono- and bi-phasic regression parameters using a mixture piecewise linear Bayesian hierarchical model. *PLoS One* **12**, e0180756, 1-19. ([PDF](#))

131. Mishima Y, Paiva B, Shi J, Massoud M, Manier S, Flores L, Perilla-Glen A, Aljawai Y, Takagi S, Huynh D, Roccaro AM, Sacco A, Alginani D, Mateos M-V, Blade J, Lahuerta J-J, Richardson P, Laubach J, Schlossman R, Anderson K, Munshi N, Prosper F, San Miguel JF, Michor F, Ghobrial IM (2017) The mutational landscape of circulating tumor cells in multiple myeloma. *Cell Reports* **19**, 218–224. ([PDF](#))

130. Temko D, Cheng Y-K, Polyak K, Michor F (2017) Mathematical modeling links pregnancy-associated changes and breast cancer risk. *Cancer Research* **77**, 2800-2809. ([PDF](#))

129. McDonald TO, Michor F (2017) SIAPopr: A computational method to simulate evolutionary branching trees for analysis of tumor clonal evolution. *Bioinformatics* **33**, 2221–2223. ([PDF](#))

128. Gibson CJ, Lindsley RC, Tchekmedyian V, Mar B, Shi J, Jaiswal S, Bosworth A, Francisco LF, He J, Bansal A, Morgan EA, Lacasce A, Freedman A, Fisher DC, Jacobsen E, Armand P, ALyea EP, Koreth J, Ho V, Soiffer R, Antin JH, Ritz J, Nikiforow S, Forman SJ, Michor F, Neuberg D, Bhatia R, Bhatia S, Ebert BL (2017) Clonal hematopoiesis associated with adverse outcomes following autologous stem cell transplantation for lymphoma. *Journal of Clinical Oncology* **35**, 1598-1605. ([PDF](#))

127. Riester M, Wu H-J, Zehir A, Gonen M, Moreira AL, Downey RJ, Michor F (2017) Distance in cancer gene expression from stem cells predicts patient survival. *PLoS One* **12**, e0173589, 1-17. ([PDF](#))

126. Campbell PT, Rebbeck TR, Nishihara R, Beck AH, Begg CB, Bogdanov AA, Cao Y, Coleman HG, Freeman GJ, Heng YJ, Huttenhower C, Irizarry RA, Kip N S, Michor F, Nevo D, Peters U, Phipps AI, Poole EM, Qian ZR, Quackenbush J, Robins H, Rogan PK, Slattery ML, Smith-Warner SA, Song M, VanderWeele TJ, Xia Daniel, Zabor EC, Zhang X, Wang M, Ogino S (2017) Proceedings of the third international molecular pathological epidemiology (MPE) meeting. *Cancer Causes Control* **28**, 167-176. ([PDF](#))

125. Han L, Wu HJ, Zhu H, Kim KY, Marjani SL, Riester M, Euskirchen G, Zi X, Yang J, Han J, Snyder M, Park IH, Irizarry R, Weissman SM, Michor F, Fan R, Pan X (2017) Bisulfite-independent analysis of CpG island methylation enables genome-scale stratification of single cells. *Nucleic Acids Research* **45**, e77, 1-13. ([PDF](#))
124. Yu HA, Sima C, Feldman D, Liu LL, Vaitheesvaran B, Cross J, Rudin CM, Kris MG, Pao W, Michor F, Riely GJ (2017) Phase 1 study of twice weekly pulse dose and daily low dose erlotinib as initial treatment for patients with EGFR-mutant lung cancers. *Annals of Oncology* **28**, 278-284. ([PDF](#))
123. Liu LL, Brumbaugh J, Bar-Nur O, Smith Z, Stadtfeld M, Meissner A, Hochedlinger K, Michor F (2016) Probabilistic modeling of reprogramming to induced pluripotent stem cells. *Cell Reports* **17**, 3395-3401. ([PDF](#))
122. Wu HJ, Michor F (2016) A computational strategy to adjust for copy number in tumor Hi-C data. *Bioinformatics* **32**, 3695-3701. ([PDF](#))
121. Gao R, Davis A, McDonald T, Sei E, Shi X, Wang Y, Tsai P-C, Casasent A, Waters J, Zhang H, Meric-Bernstam F, Michor F, Navin NE (2016) Punctuated copy number evolution and clonal stasis in triple-negative breast cancer. *Nature Genetics* **48**, 1119–1130. ([PDF](#))
120. Altrock PM*, Brendel C*, Renella R, Orkin SH, Williams DA, Michor F (2016) Mathematical modeling of erythrocyte chimerism informs genetic intervention strategies for sickle cell disease. *American Journal of Hematology* **91**, 931–937. * Equal contribution. ([PDF](#))
119. Wee B, Pietras A, Ozawa T, Bazzoli E, Podlaha O, Antczak C, Westermarck B, Nelander S, Uhrbom L, Forsberg-Nilsson K, Djaballah H, Michor F, Holland EC (2016) ABCG2 regulates self-renewal and stem cell marker expression but not tumorigenicity or radiation resistance of glioma cells. *Scientific Reports* **6**, 25956, 1-9. ([PDF](#))

118. Tang M*, Zhao R*, van de Velde H, Ge Y, Mitsiades C, Viselli S, Neuwirth R, Esseltine D-L, Anderson K, Ghobrial IM, San Miguel JF, Richardson PG, Tomasson MH, Michor F (2016) Myeloma cell dynamics in response to treatment supports a model of hierarchical differentiation and clonal evolution. *Clinical Cancer Research* **22**, 4206-4214. * Equal contribution ([PDF](#))

117. Badri H, Pitter K, Holland EC, Michor F, Leder K (2016) Optimization of radiation dosing schedules for proneural glioblastoma. *Journal of Mathematical Biology* **72**, 1301-36. ([PDF](#))

116. Liu LL, Li F, Pao W, Michor F (2015) Dose-dependent mutation rates determine optimum erlotinib dosing strategies for EGFR mutant non-small cell lung cancer patients. *PLoS ONE* **10**, e0141665, 1-17. ([PDF](#))

115. Foo J, Liu LL, Leder K, Riester M, Iwasa Y, Lengauer C, Michor F (2015) An evolutionary approach for identifying driver mutations in colorectal cancer. *PLoS Computational Biology* **11**, e1004350, 1-19. ([PDF](#))

114. Altrock PM*, Liu LL*, Michor F (2015) The mathematics of cancer: integrating quantitative models. *Nature Reviews Cancer* **15**, 730-745. * Equal contribution ([PDF](#)).

113. Michor F, Beal K (2015) Improving cancer treatment via mathematical modeling of population dynamics. *Cell* **163**, 1059-1063. ([PDF](#))

112. Janiszewska M, Liu LL, Almendro V, Kuang Y, Paweletz, Sakr RA, Weigelt B, Hanker AB,

Chandarlapaty S, King TA, Reis-Filho JS, Arteaga CL, Park SY, Michor F, Polyak K (2015) In situ single-cell analysis identifies heterogeneity for PIK3CA mutation and HER2 amplification in HER2-positive breast cancer. *Nature Genetics* **47**, 1212-1219. ([PDF](#))

111. Roccaro AM, Mishima Y, Sacco A, Moschetta M, Tai Y-T, Shi J, Zhang Y, Reagan MR, Huynh D, Kawano Y, Sahin I, Chiarini M, Manier S, Cea M, Aljawai Y, Glavey S, Morgan E, Pan C, Michor F, Cardarelli P, Kuhne M, Ghobrial IM (2015) CXCR4 regulates extra-medullary myeloma through epithelial-mesenchymal-transition-like transcriptional activation. *Cell Reports* **12**, 622-635. ([PDF](#))

110. Mumenthaler SM, Foo J, Choi NC, Heise N, Leder K, Agus DB, Pao W, Michor F, Mallick P (2015) The impact of microenvironmental heterogeneity on the evolution of drug resistance in cancer cells. *Cancer Informatics* **14**, 19-31. ([PDF](#))

109. Bambury RM, Bhatt AS, Riester M, Pedamallu CS, Duke F, Bellmunt J, Stack EC, Werner L, Park R, Iyer G, Loda M, Kantoff PM, Michor F, Meyerson M, Rosenberg JE (2015) DNA copy number analysis of metastatic urothelial carcinoma with comparison to primary tumors. *BioMed Central Cancer* **15**, 242, 1-11. ([PDF](#))

108. Bhang HC, Ruddy DA, Radhakrishna VK, Caushi JX, Zhao R, Hims MM, Singh AP, Kao I, Rakiec D, Shaw P, Balak M, Raza A, Ackley E, Keen N, Schlabach MR, Palmer M, Leary RJ, Chiang DY, Sellers WR, Michor F, Cooke VG, Korn JM, Stegmaier F (2015) High complexity barcoding to study clonal dynamics in response to cancer therapy. *Nature Medicine* **5**, 440-448. ([PDF](#))

107. Selmecki A, Maruvka YE, Richmond PA, Guillet M, Shores N, Sorenson A, De S, Kishony R, Michor F, Dowell R, Pellman D (2015) Polyploidy can drive rapid adaptation in yeast. *Nature* **519**, 349-352. ([PDF](#))

106. Ashcroft P, Michor F, Galla T (2015) Stochastic tunneling and metastable states during the somatic evolution of cancer. *Genetics* **199**, 1213-1228. ([PDF](#))

105. Kleppe M, Kwak M, Koppikar P, Riester M, Keller M, Bastian L, Hricik T, Bhagwat N, Abdel-Wahab O, Rampal R, Marubayashi S, Chen JC, Romanet V, Fridman J, Bromberg J, Teruya-Feldstein J, Murakami M, Radimerski T, Michor F, Fan R, Levine R (2015) JAK-STAT pathway activation in malignant and non-malignant cells contributes to MPN pathogenesis and therapeutic response. *Cancer Discovery* **5**, 316-331. ([PDF](#))

104. Randles A, Driscoll M, Draeger EW, Michor F (2014) A Feasibility Study using Image-based Parallel Modeling for Treatment Planning. In *Computing in Cardiology*. Cambridge, MA, 1-4. ([PDF](#))

103. Randles A, Draeger E, and Michor F (2014) Analysis of pressure gradient across aortic stenosis with massively parallel computational simulations. *Computing in Cardiology* **41**, 217-220. ([PDF](#))

102. Olshen A, Tang M, Cortes J, Gonen M, Hughes T, Branford S, Quintas-Cardama A, Michor F (2014) Dynamics of chronic myeloid leukemia response to dasatinib, nilotinib, and high-dose imatinib. *Haematologica* **99**, 1701-1709. ([PDF](#))

101. Shaknovich S, De S, Michor F (2014) Epigenetic diversity in hematopoietic neoplasms. *Biochimica et Biophysica Acta Reviews on Cancer* **1846**, 477-484. ([PDF](#))

100. Marusyk A, Tabassum D, Altrock P, Almendro V, Michor F, Polyak K (2014) Non-cell-autonomous driving of tumor growth supports sub-clonal heterogeneity. *Nature* **514**, 54-58. ([PDF](#))

99. Wang Y, Leung M, Waters J, Unruh A, Chen K, Scheet P, Vattathil S, Liang H, Multani A, Zhang H, Zhao R, Michor F, Meric-Bernstam F, Navin NE (2014) Clonal evolution in breast cancer revealed by single nucleus genome sequencing. *Nature* **512**, 155-160. ([PDF](#))
98. Ozawa T*, Riester M*, Cheng Y-K, Huse JT, Squatrito M, Helmy K, Charles N, Michor F+, Holland EC+ (2014) Most human non-GCIMP glioblastoma subtypes evolve from a common proneural-like precursor glioma. *Cancer Cell* **26**, 288-300. * Equal contribution. + Equal contribution. ([PDF](#))
97. Maruvka YE, Tang M, Michor F (2014) On the validity of using increases in 5-year survival rates to measure success in the fight against cancer. *PLoS One* **9**, e83100, 1-7. ([PDF](#))
96. Podlaha O, De S, Gonen M, Michor F (2014) Histone modifications are associated with transcript isoform diversity in normal and cancer cells. *PLoS Computational Biology* **10**, e1003611, 1-13. ([PDF](#))
95. Guancial EA, Werner L, Bellmunt J, Bamias A, Choueiri TK, Ross R, Schutz FA, Park R, O'Brien RJ, Hirsch M, Barletta JA, Berman DM, Lis R, Loda M, Stack EC, Garraway L, Riester M, Michor F, Chehab NH, Kantoff P, Rosenberg J (2014) FGFR3 expression in primary and metastatic urothelial carcinoma of the bladder. *Cancer Medicine* **3**, 835-844. ([PDF](#))
94. Riester M, Wei W, Walden L, Culhane A, Trippa L, Oliva E, Kim SH, Michor F, Huttenhower C, Parmigiani G, Birrer M (2014) Risk prediction for late-stage ovarian cancer by meta-analysis of 1,525 patient samples. *Journal of National Cancer Institute* **106**, 1-12. ([PDF](#))
93. Foo J, Michor F (2014) Evolution of acquired resistance to anti-cancer therapy. *Journal of Theoretical Biology* **355**, 10-20. ([PDF](#))

92. Michor F, Weaver VM (2014) Understanding tissue context influences on intratumor heterogeneity. *Nature Cell Biology* **16**, 301-302. ([PDF](#))

91. Almendro V, Kim HJ, Cheng Y-K, Gonen M, Itzkovitz S, Argani P, van Oudenaarden A, Sukumar S, Michor F, Polyak K (2014) Genetic and phenotypic diversity in breast tumor metastases. *Cancer Research* **74**, 1338-1348. ([PDF](#))

90. Riester M, Werner L, Bellmunt J, Selvarajah S, Guancial EA, Weir BA, Stack EC, Park RS, O'Brien R, Schutz FAB, Choueiri TK, Signoretti S, Lloreta J, Marchionni L, Gallardo E, Rojo F, Garcia DI, Chekaluk Y, Kwiatkowski D, Bochner B, Hahn WC, Ligon AH, Barletta JA, Loda M, Berman DM, Kantoff P, Michor F, Rosenberg JE (2014) Integrative analysis of 1q23.3 copy number gain in metastatic urothelial carcinoma. *Clinical Cancer Research* **20**, 1873-1883. ([PDF](#))

89. Chambwe N, Kormaksson M, Geng H, De S, Michor F, Johnson N, Morin RD, Scott DW, Godley LA, Gascoyne RD, Melnick A, Campagne F, Shaknovich R (2014) Variability in DNA methylation defines novel epigenetic subgroups of DLBCL associated with different clinical outcomes. *Blood* **123**, 1699-1708. ([PDF](#))

88. Leder K*, Pitter K*, LaPlante Q, Hambardzumyan D, Ross BD, Chan TA, Holland EC+, Michor F+ (2014) Mathematical modeling of PDGF-driven glioblastoma reveals optimized radiation dosing schedules. *Cell* **156**, 603-616. * Equal contribution. + Co-corresponding authors. ([PDF](#))

87. Almendro V, Cheng Y-K, Randles A, Itzkovitz S, Marusyk A, Ametller E, Gonzalez-Farre X, Munoz M, Russness HG, Helland A, Rye IH, Borresen-Dale A-L, Maruyama R, van Oudenaarden A, Dowsett M, Jones RL, Reis-Filho J, Gascon P, Gonen M, Michor F, Polyak K (2014) Inference of tumor evolution during chemotherapy by computational modeling and in situ analysis of genetic and phenotypic cellular diversity. *Cell Reports* **6**, 514-527. ([PDF](#))

86. Gallipoli P, Stobo J, Heaney N, Nicolini FE, Clark RE, Wilson G, Tighe J, McLintock L, Hughes T, Michor F, Paul J, Drummond M, Holyoake TL (2013) Safety and efficacy of pulsed imatinib with or without G-CSF versus continuous imatinib in chronic phase chronic myeloid leukaemia patients at 5 years follow-up. *British Journal of Haematology* **163**, 674-676. ([PDF](#))

85. Jia P, Jin H, Meador CB, Xia J, Ohashi K, Liu L, Pirazzoli V, Dahlman KB, Politi K, Michor F, Zhao Z, Pao W (2013) Next-generation sequencing of paired tyrosine kinase inhibitor-sensitive and -resistant EGFR mutant lung cancer cell lines identifies spectrum of DNA changes associated with drug resistance. *Genome Research* **23**, 1434-1445. ([PDF](#))

84. Choudhury S, Almendro V, Maruyama R, Wu Z, Merino VF, Su Y, Martins FC, Fackler MJ, Bessarabova M, Kowalczyk A, Conway T, Beresford-Smith B, Macintyre G, Cheng Y-K, Lopez-Bujada Z, Kaspi A, Hu R, Robens J, Nikolskaya T, Haakensen VD, Schnitt SJ, Argani P, Ethington G, Panos L, Grant M, Clark J, Herlihy W, Lin SJ, Chew G, Thompson EW, Greene-Colozzi A, Richardson A, Rosson GD, Pike M, Nikolsky Y, Blum J, Tamimi RM, Michor F, Haviv I, Liu XS, Sukumar S, Polyak K (2013) Molecular profiling of human mammary gland links breast cancer risk to a p27+ cell population with progenitor characteristics. *Cell Stem Cell* **13**, 117-130. ([PDF](#))

83. Haeno H, Maruvka YE, Iwasa Y*, Michor F* (2013) Stochastic tunneling of two mutations in a population of cancer cells. *PLoS One* **8**, e65724, 1-13. * Equal contribution. ([PDF](#))

82. Zhao R, Michor F (2013) Patterns of proliferative activity in the colonic crypt determine crypt stability and rates of somatic evolution. *PLoS Computational Biology* **9**, e1003082, 1-15. ([PDF](#))

81. The Physical Sciences-Oncology Center Network (2013) A physical sciences network characterization of nonmalignant and metastatic cells. *Scientific Reports* **3**, 1449, 1-12. ([PDF](#))

80. Liu L, De S, Michor F (2013) DNA replication timing and higher-order nuclear organization determine single nucleotide substitution patterns in cancer genomes. *Nature Communications* **4**, 1502, 1-9. ([PDF](#))

[PDF](#)

)

79. Ohashi K, Maruvka Y, Michor F, Pao W (2013) Epidermal growth factor receptor tyrosine kinase inhibitor-resistant disease. *Journal of Clinical Oncology* **31**, 1070-1080. ([PDF](#))

78. De S*, Shaknovich R*, Riester M*, Elemento O, Geng H, Kormaksson M, Jiang Y, Woolcock B, Johnson N, Polo JM, Cerchietti L, Gascoyne RD, Melnick A+, Michor F+ (2013) Aberration in DNA methylation in B-cell lymphomas has a complex origin and increases with disease severity. *PLoS Genetics* **9**, e1003137, 1-14. * Equal contribution. + Equal contribution. ([PDF](#))

77. Agus DB, Michor F (2012) The sciences converge to fight cancer. *Nature Physics* **8**, 773-774. (

[PDF](#)

)

76. De S, Michor F (2012) Analyzing the association of SCNA boundaries with replication timing. *Nature Biotechnology* **30**, 1045-1046. ([PDF](#))

75. Foo J, Chmielecki J, Pao W, Michor F (2012) Effects of pharmacokinetic processes and varied dosing schedules on the dynamics of acquired resistance to erlotinib in EGFR-mutant lung cancer. *Journal of Thoracic Oncology* **7**, 1583-1593. ([PDF](#))

74. Tang M*, Foo J*, Gonen M, Guilhot J, Mahon F-X, Michor F (2012) Selection pressure exerted by imatinib therapy leads to disparate outcomes of imatinib discontinuation trials. *Haematologica* **97**, 1553-1561.* Equal contribution. ([PDF](#))

73. Martins FC, De S, Almendro V, Gonen M, Park S-Y, Schnitt SJ, Tung N, Garber JE, Fetteen K, Michor F, Polyak K (2012) Evolutionary pathways in BRCA1-associated breast tumors. *Cancer Discovery* **2**, 503-511. ([PDF](#))

72. Podlaha O, Riester M, De S, Michor F (2012) Evolution of the cancer genome. Trends in Genetics **28**, 155-163. ([PDF](#))
71. Riester M*, Taylor JM*, Feifer A, Koppie T, Rosenberg JE, Downey RJ, Bochner BH, Michor F (2012) Combination of a novel gene expression signature with a clinical nomogram improves the prediction of survival in high-risk bladder cancer. Clinical Cancer Research **18**, 1323-1333. * Equal contribution. ([PDF](#))
70. Iwami S*, Haeno H*, Michor F (2012) A race between tumor immunoescape and genome maintenance selects for optimum levels of (epi)genetic instability. PLoS Computational Biology **8**, e1002370, 1-12. *Equal contribution. ([PDF](#))
69. Haeno H*, Gonen M*, Davis MB, Herman JM, Iacobuzio-Donahue CA, Michor F (2012) Computational modeling of pancreatic cancer reveals kinetics of metastasis suggesting optimum treatment strategies. Cell **148**, 362-375. * Equal contribution. ([PDF](#))
68. Cheng Y-K, Beroukhir R, Levine RL, Mellinshoff IK, Holland EC, Michor F (2012) A mathematical methodology for determining the temporal order of pathway alterations arising during gliomagenesis. PLoS Computational Biology **8**, e1002337, 1-15. ([PDF](#))
67. De S, Michor F (2011) DNA replication timing and long-range DNA interactions predict mutational landscapes of cancer genomes. Nature Biotechnology **29**, 1103-1108. ([PDF](#))
66. Leder K*, Foo J*, Skaggs B, Gorre M, Sawyers C, Michor F (2011) Fitness conferred by BCR-ABL kinase domain mutations determines the risk of pre-existing resistance in chronic myeloid leukemia. PLoS ONE **6**, e27682, 1-11. * Equal contribution. ([PDF](#))

65. Mumenthaler SM, Foo J, Leder K, Choi NC, Agus DB, Pao W, Mallick P, Michor F (2011) Evolutionary modeling of combination treatment strategies to overcome resistance to tyrosine kinase inhibitors in non-small cell lung cancer. *Molecular Pharmaceutics* **8**, 2069-2079. ([PDF](#))

64. Hambardzumyan D*, Cheng Y-K*, Haeno H*, Holland EC+, Michor F+ (2011) The probable cell of origin of NF1- and PDGF-driven glioblastomas. *PLoS ONE* **6**, e24454, 1-12. * Equal contribution. + Equal contribution. ([PDF](#))

63. Shaknovich R, Cerchietti L, Tsikitas L, Kormaksson M, De S, Figueroa ME, Ballon G, Yang SN, Weinhold N, Reimers M, Clozel T, Luttrup K, Ekstrom T, Frank J, Vasanthakumar A, Godley LA, Michor F, Elemento O, Melnick AM (2011) DNA methyltransferase 1 and DNA methylation patterning contribute to germinal center B-cell differentiation. *Blood* **118**, 3559-3569. ([PDF](#))

62. Michor F, Liphardt J, Ferrari M, Widom J (2011) What does physics have to do with cancer? *Nature Reviews Cancer* **11**, 657-670. ([PDF](#))

61. Tang M, Gonen M, Quintas-Cardama A, Cortes J, Kantarjian H, Field C, Hughes TP, Branford S, Michor F (2011) Dynamics of chronic myeloid leukemia response to long-term targeted therapy reveal treatment effects on leukemic stem cells. *Blood* **118**, 1622-1631. ([PDF](#))

60. Chmielecki J, Foo J, Oxnard GR, Hutchinson K, Ohashi K, Somwar R, Wang L, Amato KR, Arcila M, Sos ML, Socci ND, Viale A, de Stanchina E, Ginsberg MS, Thomas RK, Kris MG, Inoue A, Ladanyi M, Miller VA, Michor F, Pao W (2011) Optimization of dosing for EGFR-mutant non-small cell lung cancer with evolutionary cancer modeling. *Science Translational Medicine* **3**, 90ra59, 1-10. ([PDF](#))

59. De S, Michor F (2011) DNA secondary structures and epigenetic determinants of cancer genome evolution. *Nature Structural and Molecular Biology* **18**, 950-955. ([PDF](#))
58. Durrett R, Foo J, Leder K, Mayberry J, Michor F (2011) Intratumor heterogeneity in evolutionary models of tumor progression. *Genetics* **188**, 461-477. ([PDF](#))
57. Klinakis A, Lobry C, Abdel-Wahab O, Oh P, Haeno H, Buonamici S, van de Walle I, Cathelin S, Trimarchi T, Araldi E, Liu C, Ibrahim S, Beran M, Zavadil J, Efstratiadis A, Taghon T, Michor F, Levine RL, Aifantis A (2011) A novel tumor suppressor function for the Notch pathway in myeloid leukemia. *Nature* **473**, 230-233. ([PDF](#))
56. Iwasa Y, Michor F (2011) Evolutionary dynamics of intratumor heterogeneity. *PLoS ONE* **6**, e17866, 1-8. ([PDF](#))
55. Cheng Y-K, Beroukhi R, Levine RL, Mellinghoff IK, Michor F (2011) Reply to Parsons: Many tumor types follow the monoclonal model of tumor initiation. *Proceedings of the National Academy of Science USA* **108**, E16, 1. ([PDF](#))
54. Foo J*, Leder K*, Michor F (2010) Stochastic dynamics of cancer initiation. *Physical Biology* **8**, 015002, 1-14. * Equal contribution. ([PDF](#))
53. De Vargas Roditi L, Michor F (2010) Evolutionary dynamics of BRCA1 alterations in breast tumorigenesis. *Journal of Theoretical Biology* **273**, 207-215. ([PDF](#))

52. Leder K, Holland EC, Michor F (2010) The therapeutic implications of plasticity of the cancer stem cell phenotype. *PLoS ONE* **5**, e14366, 1-9. ([PDF](#))

51. Michor F, Polyak K (2010) The origins and implications of intratumor heterogeneity. *Cancer Prevention Research* **3**, 1361-1364. ([PDF](#))

50. Stephan-Otto Attolini C*, Cheng Y-K*, Beroukhim R, Getz G, Abdel-Wahab O, Levine RL, Mellinghoff IK, Michor F (2010) A mathematical framework to determine the temporal sequence of somatic genetic events in cancer. *Proceedings of the National Academy of Science USA* **107**, 17604-17609. * Equal contribution. ([PDF](#))

49. Danielson LS, Menendez S, Stephan-Otto Attolini C, Guijarro MV, Bisogna M, Wei J, Socci ND, Levine DA, Michor F, Hernando E (2010) A differentiation-based miRNA signature identifies leiomyosarcoma as a mesenchymal stem cell-related malignancy. *American Journal of Pathology* **177**, 908-917. ([PDF](#))

48. Durrett R, Foo J, Leder K, Mayberry J, Michor F (2010) Evolutionary dynamics of tumor progression with random fitness values. *Theoretical Population Biology* **78**, 54-66. ([PDF](#))

47. Riester M*, Stephan-Otto Attolini C*, Downey RJ, Singer S, Michor F (2010) A differentiation-based phylogeny of cancer subtypes. *PLoS Computational Biology* **6**, e1000777, 1-14. *Equal contribution. ([PDF](#)) ([Software](#))

46. Foo J, Michor F (2010) Evolution of resistance to anti-cancer therapy during general dosing schedules. *Journal of Theoretical Biology* **263**, 179-188. ([PDF](#))

45. Haeno H, Michor F (2010) The evolution of tumor metastases during clonal expansion. *Journal of Theoretical Biology* **263**

, 30-44.

[\(PDF\)](#)

44. Park SY, Gonen M, Kim HJ, Michor F*, Polyak K* (2010) Cellular and genetic diversity in the progression of in situ human breast carcinomas to an invasive phenotype. *Journal of Clinical Investigation* **120**, 636-644. * Equal contribution. [\(PDF\)](#)

43. Foo J, Michor F (2009) Evolution of resistance to targeted anti-cancer therapy during continuous and pulsed administration strategies. *PLoS Computational Biology* **5**, e1000557, 1-17. [\(PDF\)](#)

42. Haeno H, Levine RL, Gilliland DG, Michor F (2009) A progenitor cell origin of myeloid malignancies. *Proceedings of the National Academy of Science USA* **106**, 16616-16621. [\(PDF\)](#)

41. Foo J, Drummond MW, Clarkson B, Holyoke T, Michor F (2009) Eradication of chronic myeloid leukemia stem cells: a novel mathematical model predicts no therapeutic benefit of adding G-CSF to imatinib. *PLoS Computational Biology* **5**, e10000503, 1-11. [\(PDF\)](#)

40. Stephan-Otto Attolini C, Michor F (2009) Evolutionary theory of cancer. *The Year in Evolutionary Biology 2009: Annals NY Academy of Science* **1168**, 23-51. [\(PDF\)](#)

39. Liso A, Castiglione F, Cappuccio A, Stracci F, Schlenk RF, Amadori S, Thiede C, Schnittger S, Valk PJM, Doehner K, Martelli MF, Schaich M, Krauter J, Ganser A, Martelli MP, Bolli N, Loewenberg B, Haferlach T, Ehninger G, Mandelli F, Doehner H, Michor F, Falini B (2008) A one-mutation mathematical model can explain the age incidence of AML with mutated nucleophosmin (NPM1). *Haematologica* **93**, 1219-1226. [\(PDF\)](#)

38. Michor F (2008) Mathematical models of cancer stem cells. *Journal of Clinical Oncology* **26**, 2854-2861.

[\(PDF\)](#)

37. Haeno H, Iwasa Y, Michor F (2007) The evolution of two mutations during clonal expansion. *Genetics* **177**, 2209-2221. [\(PDF\)](#)
36. Michor F (2007) Quantitative approaches to analyzing imatinib-treated chronic myeloid leukemia. *Trends in Pharmacological Sciences* **28**, 197-199. [\(PDF\)](#)
35. Dingli D, Michor F, Antal T, Pacheco JM (2007) The emergence of tumor metastases. *Cancer Biology & Theory* **6**, 383-390. [\(PDF\)](#)
34. Michor F (2007) Chronic myeloid leukemia blast crisis arises from progenitors. *Stem Cells* **25**, 1114-1118. [\(PDF\)](#)
33. Dingli D, Traulsen A, Michor F (2007) (A)Symmetric stem cell replication and cancer. *PLOS Computational Biology* **3**, e53, 1-6. [\(PDF\)](#)
32. Michor F (2007) The long-term response to imatinib treatment of CML. *British Journal of Cancer* **96**, 679-680. [\(PDF\)](#)
31. Dingli D, Michor F (2006) Successful therapy must eradicate cancer stem cells. *Stem Cells* **24**, 2603-2610. [\(PDF\)](#)
30. Abbott LH, Michor F (2006) Mathematical models of targeted cancer therapy. *British Journal of Cancer* **95**, 1136-1141. [\(PDF\)](#)

29. Michor F, Iwasa Y, Nowak MA (2006) The age incidence of chronic myeloid leukemia can be explained by a one-mutation model. Proceedings of the National Academy of Science USA **103**

, 14931-14934.

[\(PDF\)](#)

28. Michor F, Iwasa Y (2006) Dynamics of metastasis suppressor gene inactivation. Journal of Theoretical Biology

241

, 676-689.

[\(PDF\)](#)

27. Brumer Y, Michor F, Shakhnovich EI (2006) Genetic instability and the quasispecies model. Journal of Theoretical Biology

241

, 216-222.

[\(PDF\)](#)

26. Iwasa Y, Michor F, Nowak MA (2006) Directional evolution of virus within a host under immune selection. In Vol.2: Mathematical studies of dynamics and evolution of infectious diseases, editors Y. Takeuchi, K. Sato and Y. Iwasa. Springer, 155-178.

25. Nowak MA, Michor F, Iwasa Y (2006) Genetic instability and clonal expansion. Journal of Theoretical Biology

241

, 26-32.

[\(PDF\)](#)

24. Michor F, Nowak MA, Iwasa Y (2006) Stochastic dynamics of metastasis formation. Journal of Theoretical Biology

240

, 521-530.

[\(PDF\)](#)

23. Iwasa Y, Nowak MA, Michor F (2006) Evolution of resistance during clonal expansion. *Genetics* **172**, 2557-2566. ([PDF](#))
22. Hauert C, Michor F, Nowak MA, Doebeli M (2006) Synergy and discounting of cooperation in social dilemmas. *Journal of Theoretical Biology* **239**, 195-202. ([PDF](#))
21. Michor F, Nowak MA, Iwasa Y (2006) Evolution of resistance to cancer therapy. *Current Pharmaceutical Design* **12**, 261-271. ([PDF](#))
20. Michor F, Iwasa Y, Lengauer C, Nowak MA (2005) Dynamics of colorectal cancer. *Seminars in Cancer Biology* **15**, 484-493. ([PDF](#))
19. Michor F, Hughes TP, Iwasa Y, Branford S, Shah NP, Sawyers CL, Nowak MA (2005) Dynamics of chronic myeloid leukemia. *Nature* **435**, 1267-1270. ([PDF](#)) ([Supplementary Online Material](#))
18. Michor F (2005) Chromosomal instability and human cancer. *Proceedings of the Royal Society London* **B 360**, 631-635. ([PDF](#))
)
17. Iwasa Y, Michor F, Komarova NL, Nowak MA (2005) Population genetics of tumor suppressor genes. *Journal of Theoretical Biology* **233**, 15-23. ([PDF](#))
16. Michor F, Iwasa Y, Lengauer C, Vogelstein B, Nowak MA (2005) Can chromosomal instability initiate tumorigenesis? *Seminars in Cancer Biology* **15**, 43-49. ([PDF](#))
15. Iwasa Y, Michor F, Nowak MA (2005) Virus evolution within patients increases pathogenicity. *Journal of Theoretical Biology* **232**, 17-26. ([PDF](#))

14. Jones, NA, Wei X, Flower DR, Wong M, Michor F, Saag MS, Hahn BH, Nowak MA, Shaw GM, Borrow P (2004) Determinants of Human Immunodeficiency Virus type 1 escape from the primary CD8+ cytotoxic T lymphocyte response. *Journal of Experimental Medicine* **200**, 1243-1256. (

[PDF](#)

)

13. Nowak MA, Michor F, Komarova NL, Iwasa Y (2004) Evolutionary dynamics of tumor suppressor gene inactivation. *Proceedings of the National Academy of Science USA* **101**, 10635-10638.

[\(PDF\)](#)

12. Iwasa Y, Michor F, Nowak MA (2004) Some basic properties of immune selection. *Journal of Theoretical Biology*

229

, 179-188. (

[PDF](#)

)

11. Iwasa Y, Michor F, Nowak MA (2004) Stochastic tunnels in evolutionary dynamics. *Genetics* **166**, 1571-1579. ([PDF](#))

10. Michor F, Iwasa Y, Rajagopalan H, Lengauer C, Nowak MA (2004) Linear model of colon cancer initiation. *Cell Cycle* **3**, 358-362. ([PDF](#))

9. Michor F, Iwasa, Y, Nowak MA (2004) Dynamics of cancer progression. *Nature Reviews Cancer* **4**, 197-206. ([PDF](#))

8. Iwasa Y, Michor F, Nowak MA (2004) Evolutionary dynamics of invasion and escape. *Journal of Theoretical Biology*

226

, 205-214. (

[PDF](#)

)

7. Iwasa Y, Michor F, Nowak MA (2003) Evolutionary dynamics of escape from biomedical intervention. *Proceedings of the Royal Society London B* **270**, 2573-2578. ([PDF](#))

6. Nowak MA, Michor F, Iwasa Y (2003) The linear process of somatic evolution. *Proceedings of the National Academy of Science USA* **100**, 14966-14969. ([PDF](#))

5. Michor F, Frank SA, May RM, Iwasa Y, Nowak MA (2003) Somatic selection for and against cancer. *Journal of Theoretical Biology* **225**, 377-382. ([PDF](#))

4. Michor F, Nowak MA, Frank SA, Iwasa Y (2003) Stochastic elimination of cancer cells. *Proceedings of the Royal Society London B* **270**, 2017-2024. ([PDF](#))

3. Michor F, Iwasa Y, Komarova NL, Nowak MA (2003) Local regulation of homeostasis favors chromosomal instability. *Current Biology* **13**, 581-584. ([PDF](#))

2. Michor F, Nowak MA (2002) Immunology tomorrow. *Nature* **420**, 741-742. ([PDF](#))

1. Michor F, Nowak MA (2002) The good, the bad and the lonely. *Nature* **419**, 677-679. ([PDF](#))