BII – Spatial & Single-cell Omics Immunology

** (Publications sorted: Newest – Oldest)

1.	**Lau MC, Srinivasan R.** [A hybrid CPU-graphics processing unit (GPU) approach for computationally efficient simulation-optimization](#). Comput. & Chem. Eng. 2016;87:49-62. (IF 4.13; 17 citations)
2.	**Chen H, Lau MC, Wong MT, Newell EW, Poidinger M, Chen JM.** [Cytofkit: A bioconductor package for an integrated mass cytometry data analysis pipeline.](#) PLoS Comput Biol. 2016;12(9);e1005112. (IF 4.779; 296 citations)
3.	**Janela B, Patel AA, Lau MC, Goh CC, Msallam R, Kong WT, Fehlings M, Hubert S, Lum J, Simon Y, Malleret B, Zolezzi F, Chen J, Poidinger M, Satpathy AT, Briseno C, Wohn C, Malissen B, Murphy KM, Maini AA, Vanhoutte L, Guilliams M, Vial E, Hannequin L, Newell E, Ng LG, Musette P, Yona S, Rachinel FH, Ginhoux F.** [A subset of type I conventional dendritic cells controls cutaneous bacterial infections through VEGFa-mediated recruitment of neutrophils.](#) Immunity. 2019;50:1069-1084;e8. (IF 43.47; 56 citations)
4.	**Kared H, Tan SW, Lau MC, Chevrier M, Tan C, How W, Wong G, Strickland M, Malleret B, Amoah A, Pilipow K, Zanon V, Govern NM, Lum J, Chen JM, Lee B, Florian MC, Geiger H, Ginhoux F, Ruiz-Mateos E, Fulop T, Rajasuriar R, Kamarulzaman A, Ng TP, Lugli E, Larbi A.** [Immunological history governs human stem cell memory CD4 heterogeneity via the Wnt signaling pathway](#). Nat Commun. 2020;11(1):821. (IF 16.6; 27 citations)
5.	**Väyrynen JP, Lau MC, Haruki K, Väyrynen SA, Dias Costa A, Borowsky J, Zhao M, Fujiyoshi K, Arima K, Twombly TS, Kishikawa J, Gu S, Aminmozaffari S, Shi S, Baba Y, Akimoto N, Ugai T, da Silva A, Song M, Wu K, Chan AT, Nishihara R, Fuchs CS, Meyerhardt JA, Giannakis M, Ogino S, Nowak JA.** [Prognostic significance of immune cell populations identified by machine learning in colorectal cancer using routine hematoxylin & eosin stained sections](#). Clin Cancer Res. 2020; 26(16):4326-4338. (IF 11.5; 34 citations)
6.	**Arima K, Lau MC, Zhao M, Haruki K, Kosumi K, Mima K, Gu M, Väyrynen JP, Twombly TS, Baba Y, Fujiyoshi K, Kishikawa J, Guo C, Baba H, Richards WG, Chan AT, Nishihara R, Meyerhardt JA, Nowak JA, Giannakis M, Fuchs CS, Ogino S.** [Utility of Metabolic Profiling of Formalin-Fixed Paraffin-Embedded Tissue Materials in Colorectal Cancer](#). Mol Cancer Res. 2020;18(6):883-890. (IF 5.2; 31 citations)
7.	**Haruki K, Kosumi K, Hamada T, Twombly TS, Väyrynen JP, Kim SA, Masugi Y, Qian ZR, Mima K, Baba Y, da Silva A, Borowsky J, Arima K, Fujiyoshi K, Lau MC, Li P, Guo C, Chen Y, Song M, Nowak JA, Nishihara R, Yanaga K, Zhang X, Wu K, Bullman S, Garrett WS, Huttenhower C, Meyerhardt JA, Giannakis M, Chan AT, Fuchs CS, Ogino S.** [Association of autophagy status with amount of Fusobacterium nucleatum in colorectal cancer](#). J Pathol. 2020;250(4):397-408. (IF 7.3; 31 citations)
8.	**Fujiyoshi K, Chen Y, Haruki K, Ugai T, Kishikawa J, Hamada T, Liu L, Arima K, Borowsky J, Väyrynen JP, Zhao M, Lau MC, Gu S, Shi S, Akimoto N, Twombly TS, Drew DA, Song M, Chan AT, Giovannucci EL, Meyerhardt JA, Fuchs CS, Nishihara R, Lennerz JK, Giannakis M, Nowak JA, Zhang X, Wu K, Ogino S.** [Smoking status at diagnosis and colorectal cancer prognosis according to tumor lymphocytic reaction](#). JNCI Cancer Spectr. 2020;4(5):pkaa040. (IF 3.68; 9 citations)

9.	**Ugai T, Haruki K, Väyrynen JP, Zhong R, Borowsky J, Fujiyoshi K, Lau MC, Zhao M, Akimoto N, Chang TW, Kishikawa J, Arima K, Shi S, Gu S, Fuchs CS, Giovannucci E, Giannakis M, Zhang X, Song M, Meyerhardt JA, Wang M, Nowak JA, Ogino S.** Coffee Intake and Colorectal Cancer Incidence According to T-Cell Response. JNCI Cancer Spectr. 2020; 4(6):pkaa068. (IF 3.68; 2 citations)
10.	**Haruki K, Kosumi K, Li P, Arima K, Väyrynen JP, Lau MC, Twombly TS, Hamada T, Glickman JN, Fujiyoshi K, Chen Y, Du C, Guo C, Väyrynen SA, Dias Costa A, Song M, Chan AT, Meyerhardt JA, Nishihara R, Fuchs CS, Liu L, Zhang X, Wu K, Giannakis M, Nowak JA, Ogino S.** An integrated analysis of lymphocytic reaction, tumour molecular characteristics, and patient survival in colorectal cancer. Br J Cancer 2020;122(9):1367-1377. (IF 8.8; 23 citations)
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13.	**Väyrynen JP, Haruki K, Väyrynen SA, Lau MC, Dias Costa A, Borowsky J, Zhao M, Ugai T, Kishikawa J, Akimoto N, Zhong R, Shi S, Chang T-W, Fujiyoshi K, Arima K, Twombly TS, Da Silva A, Song M, Wu K, Zhang X, Chan AT, Nishihara R, Fuchs CS, Meyerhardt JA, Giannakis M, Ogino S, Nowak JA.** Prognostic significance of myeloid immune cells and their spatial distribution in the colorectal cancer microenvironment. J Immunother Cancer. 2021;9(4): e002297. (IF 10.9; 16 citations)
14.	**Borowsky J, Haruki K, Lau MC, Dias Costa A, Väyrynen JP, Ugai T, Arima K, da Silva A, Felt KD, Zhao M, Twombly TS, Fujiyoshi K, Väyrynen SA, Hamada T, Mima K, Bullman S, Ng K, Meyerhardt JA, Song M, Giovannucci EL, Wu K, Zhang X, Freeman GJ, Huttenhower C, Garrett WS, Chan AT, Leggett BA, Whitehall VLJ, Walker N, Brown I, Bettington M, Nishihara R, Fuchs CS, Lennerz JK, Giannakis M, Nowak JA, and Ogino S.** Association of Fusobacterium nucleatum with Specific T Cell Subsets in the Colorectal Carcinoma Microenvironment. Clin Cancer Res. 2021;27(10):2816-2826. (IF 11.5; 36 citations)
15.	**Väyrynen SA, Zhang J, Yuan C, Väyrynen JP, Dias Costa A, Williams H, Morales-Oyarvide V, Lau MC, Rubinson DA, Dunne RF, Kozak MM, Wang W, Agostini-Vulaj D, Drage MG, Brais L, Reilly E, Rahma O, Clancy T, Wang J, Linehan DC, Aguirre AJ, Fuchs CS, Coussens LM, Chang DT, Koong AC, Hezel AF, Ogino S, Nowak JA, Wolpin BM.** Composition, Spatial Characteristics, and Prognostic Significance of Myeloid Cell Infiltration in Pancreatic Cancer. Clin Cancer Res. 2021;27(4):1069-1081. (IF 11.5; 63 citations)
16.	**Sikavi DR, Nguyen LH, Haruki K, Ugai T, Ma W, Wang DD, Thompson KN, Yan Y, Branck T, Wilkinson JE, Akimoto N, Zhong R, Lau MC, Mima K, Kosumi K, Morikawa T, Rimm EB, Garrett WS, Izard J, Cao Y, Song M, Huttenhower C, Ogino S, Chan AT.** The Sulfur Microbial Diet and Risk of Colorectal Cancer by Molecular Subtypes and Intratumoral Microbial Species in Adult Men. Clin Transl Gastroenterol. 2021;12(8):e00338. (IF 3.6; 6 citations)
17.	**Rouers A, Appanna R, Chevrier M, Lum J, Lau MC, Tan L. Tay A, Sathiakumar D, Kaur K, Boehme J, Leo YS, Howland SW, Singhal A, Chen J, Fink K.** CD27hiCD38hi plasmablasts are activated B cells of mixed origin with distinct function. iScience. 2021;24(5):102482. (IF 5.8; 9 citations)

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21.	**Ugai T, Väyrynen JP, Haruki K, Akimoto N, Lau MC, Zhong R, Kishikawa J, Väyrynen SA, Zhao, M, Fujiyoshi K, Costa AD, Borowsky J, Arima K, Guerriero JL, Fuchs CS, Zhang X, Song M, Wang M, Giannakis M, Meyerhardt JA, Nowak JA, Ogino S.** [Smoking and Incidence of Colorectal Cancer Subclassified by Tumor-Associated Macrophage Infiltrates](). JNCI. 2022;114(1):68–77. (IF 10.3; 14 citations)
22.	**Yang Y, Shi X, Zhou Q, Lau MC, Sun L, Yeong J, Liu J.** [SC-MEB: spatial clustering with hidden Markov random field using empirical Bayes](). Brief. Bioinformatics. 2022;23(1): bbab466. (IF 9.5; 37 citations)
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24.	**Fincham REA, Bashiri H, Lau MC, Joe PSJ.** [Multiplex Immunohistochemistry/ Immunofluorescence Technique: The Potential and Promise for Clinical Application](). Front. Mol. Biosci. 2022;9. (IF 5; 5 citations)
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29.	**Lau MC, Yi Y, Goh D, Cheung CCL, Tan B, Lim CTJ, Joseph CR, Wee F, Lee NJ, Lim X, Lim CJ, Leow WQ, Lee JY, Ng CYC, Bashiri H, Cheow PC, Chan CY, Koh YX, Tan TT, Kalmimuddin S, Tai WMD, Ng JL, Low GHJ, Lim KHT, Jin L, Yeong PSJ.** Case Report: [Understanding the Impact of Persistent Tissue-localization of SARS-CoV-2 on Immune Response Activity via Spatial Transcriptomic Analysis of Two Cancer Patients with COVID-19 Co-Morbidity](#). Front Immunol. 2022 Sep 12;13:978760. (IF 7.3; 2 citations)
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31.	**Williams HL, Dias Costa A, Zhang J, Raghavan S, Winter PS, Kapner KS, Ginebaugh SP, Vayrynen SA, Vayrynen JP, Chen Y, Navia AW, Wang J, Yang A, Bosse TL, Kalekar RL, Lowder KE, Lau MC, Elganalny D, Morales-Oyarvide V, Rubinson DA, Singh H, Perez K, Cleary JM, Clancy TE, Wang J, Mancias JD, Brais KL, Hill ER, Kozak MM, Linehan DC, Dunne RF, Chang DT, Koong AC, Hezel AF, Hahn WC, Shalek AK, Aguirre AJ, Nowak JA, Wolpin BM.** [Spatially-resolved single-cell assessment of pancreatic cancer expression subtypes reveals co-expressor phenotypes and extensive intra-tumoral heterogeneity](#). Cancer Res. 83(3) (2023): 441-455. (IF 11.2; 10 citations)
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35.	**Lee R, Wu Y, Goh D, Tan V, Ng CW, Lim JC, Lau MC, Sheng JY.** [Application of Artificial Intelligence to In Vitro Tumor Modeling and Characterization of the Tumor Microenvironment](#). Adv. Healthc. Mater. 2023 Apr 15:2202457. (IF 10; 4 citations)
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