

**University of Washington**  
**Department of Pathology**  
**Selection of Publications for the Autumn 2019 Quarterly Newsletter**

[Fibrillary Glomerulonephritis: Clinicopathologic Features and Atypical Cases from a Multi-Institutional Cohort.](#) Andeen NK, **Akilesh S, Najafian B, Nicosia RF, Alpers CE, Smith KD.** Clin J Am Soc Nephrol. 2019; Epub ahead of print.

[Differential Expression of Parietal Epithelial Cell and Podocyte Extracellular Matrix Proteins in Focal Segmental Glomerulosclerosis and Diabetic Nephropathy.](#) Chan GC, **Alpers CE, Hudkins K.** Am J Physiol Renal Physiol. 2019 Oct 21 Epub ahead of print.

[Function Follows Form - A Review of Cardiac Cell Therapy.](#) Nakamura K, **Murry CE.** Circ J. 2019 Nov 25;83(12):2399-2412.

[A Proteomic Perspective on Cardiomyocyte Maturation.](#) Muraoka N, Sun B, **Murry CE.** Circ Res. 2019 Nov 8;125(11):954-956.

[TFPa/HADHA is required for fatty acid beta-oxidation and cardiolipin re-modeling in human cardiomyocytes.](#) Miklas JW, Clark E, Levy S, Detraux D, Leonard A, Beussman K, Showalter MR, Smith AT, Hofsteen P, Yang X, Macadangdang J, Manninen T, Rafferty D, Madan A, Suomalainen A, Kim DH, **Murry CE,** Fiehn O, Sniadecki NJ, Wang Y, Ruohola-Baker H. Nat Commun. 2019 Oct 11;10(1):4671.

[Cronos Titin Is Expressed in Human Cardiomyocytes and Necessary for Normal Sarcomere Function.](#) Zaunbrecher RJ, Abel AN, Beussman K, Leonard A, von Frieling-Salewsky M, Fields PA, Pabon L, Reinecke H, Yang X, Macadangdang J, Kim DH, Linke WA, Sniadecki NJ, Regnier M, **Murry CE.** Circulation. 2019 Nov 12;140(20):1647-1660.

[Fatty Acids Enhance the Maturation of Cardiomyocytes Derived from Human Pluripotent Stem Cells.](#) Yang X, Rodriguez ML, Leonard A, Sun L, Fischer KA, Wang Y, Ritterhoff J, Zhao L, Kolwicz SC Jr, Pabon L, Reinecke H, Sniadecki NJ, Tian R, Ruohola-Baker H, **Xu H, Murry CE.** Stem Cell Reports. 2019 Oct 8;13(4):657-668.

[Chromatin compartment dynamics in a haploinsufficient model of cardiac laminopathy.](#) **Bertero A,** Fields PA, Smith AST, Leonard A, Beussman K, Sniadecki NJ, Kim DH, Tse HF, Pabon L, Shendure J, Noble WS, **Murry CE.** J Cell Biol. 2019 Sep 2;218(9):2919-2944.

[Learn from Your Elders: Developmental Biology Lessons to Guide Maturation of Stem Cell-Derived Cardiomyocytes.](#) Marchianò S, **Bertero A, Murry CE.** Pediatr Cardiol. 2019 Oct;40(7):1367-1387.

[Epicardial cells derived from human embryonic stem cells augment cardiomyocyte-driven heart regeneration.](#) Bargehr J, Ong LP, Colzani M, Davaapil H, Hofsteen P, Bhandari S, Gambardella L, Le Novère N, Iyer D, Sampaziotis F, Weinberger F, **Bertero A,** Leonard A, Bernard WG, Martinson A, Figg N, Regnier M, Bennett MR, **Murry CE,** Sinha S. Nat Biotechnol. 2019 Aug;37(8):895-906.

“Prediction of survival of HPV16-negative, p16-negative oral cavity cancer patients using a 13-gene signature: A multicenter study using FFPE samples.” Chen C, Lohavanichbutr P, Zhang Y, Houck JR, **Upton MP,** Abedi-Ardekani B, Agudo A, Ahrens W, Alemany L, Anantharaman D, Conway DI, Futran ND, Holcatova

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“Rapamycin persistently improves cardiac function in aged, male and female BL/6 mice, even following cessation of treatment.” Quarles E, Basisty N, Chiao YA, Merrihew G, Gu H, **Sweetwyne MT**, Fredrickson J, Nguyen NH, Razumova M, Kooiker K, Moussavi-Harami F, Regnier M, Quarles C, MacCoss M, **Rabinovitch PS**. Aging Cell. 2019; In press.

[Differential effects of various genetic mouse models of the mechanistic target of rapamycin complex I inhibition on heart failure.](#) Dai DF, Liu Y, Basisty N, Karunadharma P, Dastidar SG, Chiao YA, Chen T, Beyer RP, Chin MT, MacCoss M, La Spada AR, **Rabinovitch PS**. Geroscience. 2019 Oct 24; Epub ahead of print.

[DNA flow cytometric and interobserver study of crypt cell atypia in inflammatory bowel disease.](#) Wen KW, Umetsu SE, Goldblum JR, Gill RM, Kim GE, Joseph NM, **Rabinovitch PS**, Kakar S, Lauwers GY, Choi WT. Histopathology. 2019 Oct;75(4):578-588.

[Diagnosis, risk stratification, and management of ampullary dysplasia by DNA flow cytometric analysis of paraffin-embedded tissue.](#) Wen KW, Kim GE, **Rabinovitch PS**, Wang D, Mattis AN, Choi WT. Mod Pathol. 2019 Sep;32(9):1291-1302.

[Should Margin Status of Biopsies Be Included in Dermatopathology Reports? Clinician Preferences and the Importance of Unambiguous Language.](#) Perrone M, Chang O. Am J Dermatopathol. 2019 Oct; Epub ahead of print.

[High Concentration of Medium-Sized HDL Particles and Enrichment in HDL Paraoxonase 1 Associate With Protection From Vascular Complications in People With Long-standing Type 1 Diabetes.](#) Vaisar T, Kanter JE, Wimberger J, Irwin AD, Gauthier J, Wolfson E, Bahnam V, Wu IH, Shah H, Keenan HA, Greenbaum CJ, King GL, Heinecke JW, **Bornfeldt KE**. Diabetes Care. 2019 Oct; dc190772.

[Expanding phenotype with severe midline brain anomalies and missense variant supports a causal role for FOXA2 in 20p11.2 deletion syndrome.](#) Dines JN, Liu YJ, Neufeld-Kaiser W, Sawyer T, Ishak GE, Tully HM, Racobaldo M, Sanchez-Valle A, **Disteche CM**, Juusola J, Torti E, McWalter K, Doherty D, Dipple KM. Am J Med Genet. 2019 July.

[Fetal origin confers radioresistance on liver macrophages via p21.](#) Soysa R, Lampert S, Yuen S, Douglass AN, Li W, Pfeffer K, **Crispe IN**. J Hepatol. 2019 Sept; 71(3):553-562.

Collaboration with Pillarisetty lab in surgery results in a publication in Clinical Cancer Res. Seo YD, Jiang X, Sullivan KM, **Jalikus FG**, Smythe KS, Abbasi A, Vignali M, Park JO, Daniel SK, Pollack SM, Kim TS, Yeung R, **Crispe IN**, **Pierce RH**, Robins H, Pillarisetty VG.

[Hyperspectral Raman microscopy can accurately differentiate single cells of different human thyroid nodules.](#) Oliveira M, Campbell MJ, Afify A, **Huang EC**, Chan JW. Biomedical Optics Express. 2019;10(9):4411-4421.

[Fibrillary Glomerulonephritis: Clinicopathologic Features and Atypical Cases from a Multi-Institutional Cohort.](#) Andeen NK, Troxell ML, Riazzy M, Avasare RS, Lapasia J, Jefferson JA, **Akilesh S, Najafian B, Nicosia RF, Alpers CE, Smith KD.** Clin J Am Soc Nephrol. 2019 Dec 6;14(12):1741-1750.

[The plaque-aortic ring assay: a new method to study human atherosclerosis-induced angiogenesis.](#) Aplin AC, **Nicosia RF.** Angiogenesis. 2019 Aug;22(3):421-431.

[Cancer-Associated Mutations but No Cancer: Insights into the Early Steps of Carcinogenesis and Implications for Early Cancer Detection.](#) **Kennedy SR,** Zhang Y, **Risques RA.** Trends in Cancer. 2019 Sep;5(9):531-540.

"Characterization of TP53 mutations in Pap test DNA of women with and without serous ovarian carcinoma." Krimmel-Morrison JD, Ghezelayagh TS, Lian S, Zhang Y, Fredrickson J, Nachmanson D, Baker KT, Radke MR, Hun E, Norquist BM, Emond MJ, Swisher EM, **Risques RA.** Gynecologic Oncology. 2019; In press.

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[Ultra-Sensitive TP53 Sequencing for Cancer Detection Reveals Progressive Clonal Selection in Normal Tissue over a Century of Human Lifespan.](#) Salk JJ, Loubet-Seneor K, Maritschnegg E, Valentine CC, Williams LN, Higgins JE, Horvat R, Vanderstichele A, Nachmanson D, Baker KT, Emond MJ, Loter E, **Tretiakova M,** Soussi T, **Loeb LA,** Zeillinger R, Speiser P, **Risques RA.** Cell Rep. 2019 July;28(1):132-144.e3.

[A high-resolution landscape of mutations in the BCL6 super-enhancer in normal human B cells.](#) Shen JC, Kamath-Loeb AS, Kohn BF, **Loeb KR,** Preston BD, **Loeb LA.** Proc Natl Acad Sci USA. 2019 Nov; Epub ahead of print.

[Unexpectedly High Subclonal Mutational Diversity in Human Colorectal Cancer and Its Significance.](#) **Loeb LA,** Kohn BF, Loubet-Seneor KJ, Dunn YJ, **Ahn EH,** O'Sullivan JN, Salk JJ, Bronner MP, Beckman RA. BioRxiv 672493 [Preprint]. 2019 June.

[Phosphoproteomic and Kinomic Signature of Clinically Aggressive Grade I \(1.5\) Meningiomas Reveals RB1 Signaling as a Novel Mediator and Biomarker.](#) **Cimino PJ, Gonzalez-Cuyar L, Zhang J, Pan C.** Clin Cancer Res. 2019 Oct; Epub ahead of print.

[Mitotic Index Thresholds Do Not Predict Clinical Outcome for IDH-Mutant Astrocytoma.](#) Yoda R, **Keene CD, Cimino PJ.** J Neuropathol Exp Neurol. 2019 Nov 1;78(11):1002-1010.

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[Arming oHSV with ULBP3 drives abscopal immunity in lymphocyte-depleted glioblastoma.](#) Wirsching HG, Zhang H, Szulzewsky F, Arora S, Grandi P, **Cimino PJ,** Amankulor N, Campbell JS, McFerrin L, Pattwell SS,

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[Anti-PD-L1 antibody direct activation of macrophages contributes to a radiation-induced abscopal response in glioblastoma.](#) Ene CI, Kreuser SA, Jung M, Zhang H, Arora S, White Moyes K, Szulzewsky F, Barber J, **Cimino PJ**, Wirsching HG, Patel A, Kong P, Woodiwiss TR, Durfy SJ, Houghton AM, **Pierce RH**, Parney IF, Crane CA, Holland EC. *Neuro Oncol*. 2019 December; Epub ahead of print.

[Mitotic Index Thresholds Do Not Predict Clinical Outcome for IDH-Mutant Astrocytoma.](#) Yoda RA, Marxen T, Longo L, Ene C, Wirsching HG, **Keene CD**, Holland EC, **Cimino PJ**. *J Neuropathol Exp Neurol*. 2019; 78(11): 1002-1010.

[Quantitative analysis of chondroitin sulfate disaccharides from human and rodent fixed brain tissue by electrospray ionization-tandem mass spectrometry.](#) Alonge KM, Logsdon AF, Murphree TA, Banks WA, **Keene CD**, Edgar JS, Whittington D, Schwartz MW, Guttman M. *Glycobiology*. 2019; 29(12):847-860.

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[Distinct expression patterns of Carbonic Anhydrase IX in clear cell, microcystic, and angiomatous meningiomas.](#) Chkheidze R, **Cimino PJ**, Hatanpaa KJ, White CL, Ferreira M, Piccirillo SGM, Li L, Rajaram S, Nyagilo JO, Burns DK, Raisanen JM, Cai C. *J Neuropathol Exp Neurol*. 2019 Sep; Epub ahead of print.

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[Traumatic Brain Injury Triggers APP and Tau Cleavage by Delta-secretase, Mediating Alzheimer's Disease Pathology.](#) Wu Z, Wang ZH, Liu X, Zhang Z, Yu SP, **Keene CD**, Cheng L, Ye K. Prog Neurobiol. 2019 Nov 25:101730.

[Cross species application of quantitative neuropathology assays developed for clinical Alzheimer's disease samples.](#) Urfer SR, **Latimer CS**, Ladiges W, **Keene CD**, Benbow S, Harrison B, Promislow DEL, **Kaeberlein M**, Kraemer BC, Wang A, Guscetti F, **Darvas M**. Pathobiol Aging Age Relat Dis. 2019 Sep 3;9(1):1657768.

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[Latest advances in aging research and drug discovery.](#) Bakula D, Ablasser A, Aguzzi A, Antebi A, Barzilai N, Bittner MI, Jensen MB, Calkhoven CF, Chen D, Grey ADNJ, Feige JN, Georgievskaya A, Gladyshev VN, Golato T, Gudkov AV, Hoppe T, **Kaeberlein M**, Katajisto P, Kennedy BK, Lal U, Martin-Villalba A, Moskalev AA, Ozerov I, Petr MA, Reason, Rubinsztein DC, Tyshkovskiy A, Vanhaelen Q, Zhavoronkov A, Scheibye-Knudsen M. *Aging.* 2019 Nov 21;11(22):9971-9981.

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