Highly cited cancer papers, 2008–2010

The following tables show the primary research papers on cancer published between 2008 and 2010 that have had the highest number of citations in the literature. To create these tables, we queried the *Scopus* database (http://www.scopus.com/) to search for articles that included the term 'cancer' or related terms in the title, abstract or keywords. After sorting the results on the basis of citation number, we removed reviews and epidemiological studies. The predominance of genomic studies in these tables is remarkable. The number of citations is accurate as of 8 February 2010. The tables include papers that have been cited at least 250 (2008 table), 125 (2009 table) and 35 (2010 table) times.

Highly cited cancer research published in 2008

Reference	Times cited
Llovet, J.M. *et al.* Sorafenib in advanced hepatocellular carcinoma. *N. Engl. J. Med.* **359**, 378–390.	809
Amado, R.G. *et al.* Wild-type KRAS is required for panitumumab efficacy in patients with metastatic colorectal cancer. *J. Clin. Oncol.* **26**, 1626–1634.	579
McLendon, R. *et al.* Comprehensive genomic characterization defines human glioblastoma genes and core pathways. *Nature* **455**, 1061–1068.	534
Parsons, D.W. *et al.* An integrated genomic analysis of human glioblastoma multiforme. *Science* **321**, 1807–1812.	513
Mani, S.A. *et al.* The epithelial-mesenchymal transition generates cells with properties of stem cells. *Cell* **133**, 704–715.	503
Karapetis, C.S. *et al.* K-ras mutations and benefit from cetuximab in advanced colorectal cancer. *N. Engl. J. Med.* **359**, 1757–1765.	461
Jones, S. *et al.* Core signaling pathways in human pancreatic cancers revealed by global genomic analyses. *Science* **321**, 1801–1806.	395
Lièvre, A. *et al.* KRAS mutations as an independent prognostic factor in patients with advanced colorectal cancer treated with cetuximab. *J. Clin. Oncol.* **26**, 374–379.	394
Scagliotti, G.V. *et al.* Phase III study comparing cisplatin plus gemcitabine with cisplatin plus pemetrexed in chemotherapy-naive patients with advanced-stage non–small-cell lung cancer. *J. Clin. Oncol.* **26**, 3543–3551.	394
Motzer, R.J. *et al.* Efficacy of everolimus in advanced renal cell carcinoma: a double-blind, randomised, placebo-controlled phase III trial. *Lancet* **372**, 449–456.	393
Saltz, L.B. *et al.* Bevacizumab in combination with oxaliplatin-based chemotherapy as first-line therapy in metastatic colorectal cancer: a randomized phase III study. *J. Clin. Oncol.* **26**, 2013–2019.	315
Quintana, E. *et al.* Efficient tumour formation by single human melanoma cells. *Nature* **456**, 593–598.	310
Feng, H. *et al.* Clonal integration of a polyomavirus in human Merkel cell carcinoma. *Science* **319**, 1096–1100.	309
Gregory, P.A. *et al.* The miR-200 family and miR-205 regulate epithelial to mesenchymal transition by targeting ZEB1 and SIP1. *Nat. Cell Biol.* **10**, 593–601.	304
Tavazoie, S.F. *et al.* Endogenous human microRNAs that suppress breast cancer metastasis. *Nature* **451**, 147–152.	303
Thorgeirsson, T.E. *et al.* A variant associated with nicotine dependence, lung cancer and peripheral arterial disease. *Nature* **452**, 638–642.	303
Hung, R.J. *et al.* A susceptibility locus for lung cancer maps to nicotinic acetylcholine receptor subunit genes on 15q25. *Nature* **452**, 633–637.	276
Amos, C.I. *et al.* Genome-wide association scan of tag SNPs identifies a susceptibility locus for lung cancer at 15q25.1. *Nat. Genet.* **40**, 616–622.	261
Mitchell, P.S. *et al.* Circulating microRNAs as stable blood-based markers for cancer detection. *Proc. Natl. Acad. Sci. USA* **105**, 10513–10518.	261
Cunningham, D. *et al.* Capecitabine and oxaliplatin for advanced esophagogastric cancer. *N. Engl. J. Med.* **358**, 36–46.	259
Di Nicolantonio, F. *et al.* Wild-type BRAF is required for response to panitumumab or cetuximab in metastatic colorectal cancer. *J. Clin. Oncol.* **26**, 5705–5712.	258
Ben-Porath, I. *et al.* An embryonic stem cell–like gene expression signature in poorly differentiated aggressive human tumors. *Nat. Genet.* **40**, 499–507.	256
Ding, L. *et al.* Somatic mutations affect key pathways in lung adenocarcinoma. *Nature* **455**, 1069–1075.	255
Qian, X. *et al. In vivo* tumor targeting and spectroscopic detection with surface-enhanced Raman nanoparticle tags. *Nat. Biotech.* **26**, 83–90.	254
De Roock, W. *et al.* KRAS wild-type state predicts survival and is associated to early radiological response in metastatic colorectal cancer treated with cetuximab. *Ann. Oncol.* **19**, 508–515.	251
Asangani, I.A. *et al.* MicroRNA-21 (miR-21) post-transcriptionally downregulates tumor suppressor Pdcd4 and stimulates invasion, intravasation and metastasis in colorectal cancer. *Oncogene* **27**, 2128–2136.	250

Highly cited cancer research published in 2009	
Reference	Times cited
Schröder, F.H. *et al.* Screening and prostate-cancer mortality in a randomized European study. *N. Engl. J. Med.* **360**, 1320–1328.	576
Berg, C.D. *et al.* Mortality results from a randomized prostate-cancer screening trial. *N. Engl. J. Med.* **360**, 1310–1319.	437
Mok, T.S. *et al.* Gefitinib or carboplatin-paclitaxel in pulmonary adenocarcinoma. *N. Engl. J. Med.* **361**, 947–957.	376
Van Cutsem, E. *et al.* Cetuximab and chemotherapy as initial treatment for metastatic colorectal cancer. *N. Engl. J. Med.* **360**, 1408–1417.	333
Fong, P.C. *et al.* Inhibition of poly(ADP-ribose) polymerase in tumors from BRCA mutation carriers. *N. Engl. J. Med.* **361**, 123–134.	315
Pàez-Ribes, M. *et al.* Antiangiogenic therapy elicits malignant progression of tumors to increased local invasion and distant metastasis. *Cancer Cell* **15**, 220–231	275
Lippman, S.M. *et al.* Effect of selenium and vitamin E on risk of prostate cancer and other cancers: the selenium and vitamin E cancer prevention trial (SELECT). *J. Am. Med. Assoc.* **301**, 39–51.	273
Pirker, R. *et al.* Cetuximab plus chemotherapy in patients with advanced non–small-cell lung cancer (FLEX): an open-label randomised phase III trial. *Lancet* **373**, 1525–1531.	239
Ebos, J.M. *et al.* Accelerated metastasis after short-term treatment with a potent inhibitor of tumor angiogenesis. *Cancer Cell* **15**, 232–239.	236
Tol, J. *et al.* Chemotherapy, bevacizumab and cetuximab in metastatic colorectal cancer. *N. Engl. J. Med.* **360**, 563–572.	224
Bokemeyer, C. *et al.* Fluorouracil, leucovorin, and oxaliplatin with and without cetuximab in the first-line treatment of metastatic colorectal cancer. *J. Clin. Oncol.* **27**, 663–671.	224
Reck, M. *et al.* Phase III trial of cisplatin plus gemcitabine with either placebo or bevacizumab as first-line therapy for nonsquamous non-small-cell lung cancer: AVAiL. *J. Clin. Oncol.* **27**, 1227–1234.	221
Gnant, M. *et al.* Endocrine therapy plus zoledronic acid in premenopausal breast cancer. *N. Engl. J. Med.* **360**, 679–691.	220
Yan, H. *et al.* IDH1 and IDH2 mutations in gliomas. *N. Engl. J. Med.* **360**, 765–773.	216
Cheng, A.-L. *et al.* Efficacy and safety of sorafenib in patients in the Asia-Pacific region with advanced hepatocellular carcinoma: a phase III randomised, double-blind, placebo-controlled trial. *Lancet Oncol.* **10**, 25–34.	213
Sreekumar, A. *et al.* Metabolomic profiles delineate potential role for sarcosine in prostate cancer progression. *Nature* **457**, 910–914.	175
Baxter, N.N. *et al.* Association of colonoscopy and death from colorectal cancer. *Ann. Internal Med.* **150**, 1–8.	160
Barker, N. *et al.* Crypt stem cells as the cells-of-origin of intestinal cancer. *Nature* **457**, 608–611.	158
Stupp, R. *et al.* Effects of radiotherapy with concomitant and adjuvant temozolomide versus radiotherapy alone on survival in glioblastoma in a randomised phase III study: 5-year analysis of the EORTC-NCIC trial. *Lancet Oncol.* **10**, 459–466.	156
Rosell, R. *et al.* Screening for epidermal growth factor receptor mutations in lung cancer. *N. Engl. J. Med.* **361**, 958–967.	154
Hecht, J.R. *et al.* A randomized phase IIIB trial of chemotherapy, bevacizumab and panitumumab compared with chemotherapy and bevacizumab alone for metastatic colorectal cancer. *J. Clin. Oncol.* **27**, 672–680.	154
Motzer, R.J. *et al.* Overall survival and updated results for sunitinib compared with interferon α in patients with metastatic renal cell carcinoma. *J. Clin. Oncol.* **27**, 3584–3590.	139
Paavonen, J. *et al.* Efficacy of human papillomavirus (HPV)-16/18 AS04-adjuvanted vaccine against cervical infection and precancer caused by oncogenic HPV types (PATRICIA): final analysis of a double-blind, randomised study in young women. *Lancet* **374**, 301–314.	138
Kota, J. *et al.* Therapeutic microRNA delivery suppresses tumorigenesis in a murine liver cancer model. *Cell* **137**, 1005–1017.	131
Irizarry, R.A. *et al.* The human colon cancer methylome shows similar hypo- and hypermethylation at conserved tissue-specific CpG island shores. *Nat. Genet.* **41**, 178–186.	131
Grivennikov, S. *et al.* IL-6 and Stat3 are required for survival of intestinal epithelial cells and development of colitis-associated cancer. *Cancer Cell* **15**, 103–113.	128
Sartore-Bianchi, A. *et al.* PIK3CA mutations in colorectal cancer are associated with clinical resistance to EGFR-targeted monoclonal antibodies. *Cancer Res.* **69**, 1851–1857.	127
Delhommeau, F. *et al.* Mutation in TET2 in myeloid cancers. *N. Engl. J. Med.* **360**, 2289–2301.	127
Gupta, P.B. *et al.* Identification of selective inhibitors of cancer stem cells by high-throughput screening. *Cell* **138**, 645–659.	126
Kim, S. *et al.* Carcinoma-produced factors activate myeloid cells through TLR2 to stimulate metastasis. *Nature* **457**, 102–106.	125

Highly cited cancer research published in 2010	
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Pleasance, E.D. *et al.* A comprehensive catalogue of somatic mutations from a human cancer genome. *Nature* **463**, 191–196.	100
Pleasance, E.D. *et al.* A small-cell lung cancer genome with complex signatures of tobacco exposure. *Nature* **463**, 184–190.	82
Beroukhim, R. *et al.* The landscape of somatic copy-number alteration across human cancers. *Nature* **463**, 899–905.	74
Mitsudomi, T. *et al.* Gefitinib versus cisplatin plus docetaxel in patients with non–small-cell lung cancer harbouring mutations of the epidermal growth factor receptor (WJTOG3405): an open label, randomised phase 3 trial. *Lancet Oncol.* **11**, 121–128.	72
Hodi, F.S. *et al.* Improved survival with ipilimumab in patients with metastatic melanoma. *N. Engl. J. Med.* **363**, 711–723.	72
Heidorn, S.J. *et al.* Kinase-dead BRAF and oncogenic RAS cooperate to drive tumor progression through CRAF. *Cell* **140**, 209–221.	66
Verhaak, R.G. *et al.* Integrated genomic analysis identifies clinically relevant subtypes of glioblastoma characterized by abnormalities in PDGFRA, IDH1, EGFR and NF1. *Cancer Cell* **17**, 98–110.	65
Sternberg, C.N. *et al.* Pazopanib in locally advanced or metastatic renal cell carcinoma: results of a randomized phase III trial. *J. Clin. Oncol.* **28**, 1061–1068.	60
Poulikakos, P.I. *et al.* RAF inhibitors transactivate RAF dimers and ERK signalling in cells with wild-type BRAF. *Nature* **464**, 427–430.	58
Ward, P.S. *et al.* The common feature of leukemia-associated IDH1 and IDH2 mutations is a neomorphic enzyme activity converting α-ketoglutarate to 2-hydroxyglutarate. *Cancer Cell* **17**, 225–234.	55
Hatzivassiliou, G. *et al.* RAF inhibitors prime wild-type RAF to activate the MAPK pathway and enhance growth. *Nature* **464**, 431–435.	51
Rajkumar, S.V. *et al.* Lenalidomide plus high-dose dexamethasone versus lenalidomide plus low-dose dexamethasone as initial therapy for newly diagnosed multiple myeloma: an open-label randomised controlled trial. *Lancet Oncol.* **11**, 29–37.	50
Andriole, G.L. *et al.* Effect of dutasteride on the risk of prostate cancer. *N. Engl. J. Med.* **362**, 1192–1202.	48
Bonner, J.A. *et al.* Radiotherapy plus cetuximab for locoregionally advanced head and neck cancer: 5-year survival data from a phase 3 randomised trial, and relation between cetuximab-induced rash and survival. *Lancet Oncol.* **11**, 21–28.	48
Flaherty, K.T. *et al.* Inhibition of mutated, activated BRAF in metastatic melanoma. *N. Engl. J. Med.* **363**, 809–819.	48
Atkin, W.S. *et al.* Once-only flexible sigmoidoscopy screening in prevention of colorectal cancer: a multicentre randomised controlled trial. *Lancet* **375**, 1624–1633.	47
Davis, M.E. *et al.* Evidence of RNAi in humans from systemically administered siRNA via targeted nanoparticles. *Nature* **464**, 1067–1070.	47
Maemondo, M. *et al.* Gefitinib or chemotherapy for non–small-cell lung cancer with mutated EGFR. *N. Engl. J. Med.* **362**, 2380–2388.	43
Albain, K.S. *et al.* Prognostic and predictive value of the 21-gene recurrence score assay in postmenopausal women with node-positive, oestrogen-receptor-positive breast cancer on chemotherapy: a retrospective analysis of a randomised trial. *Lancet Oncol.* **11**, 55–65.	43
Dalgliesh, G.L. *et al.* Systematic sequencing of renal carcinoma reveals inactivation of histone modifying genes. *Nature* **463**, 360–363.	43
Ding, L. *et al.* Genome remodelling in a basal-like breast cancer metastasis and xenograft. *Nature* **464**, 999–1005.	40
Sharma, S.V. *et al.* A chromatin-mediated reversible drug-tolerant state in cancer cell subpopulations. *Cell* **141**, 69–80.	39
Morin, R.D. *et al.* Somatic mutations altering EZH2 (Tyr641) in follicular and diffuse large B-cell lymphomas of germinal-center origin. *Nat. Genet.* **42**, 181–185.	39
Gupta, R.A. *et al.* Long non-coding RNA HOTAIR reprograms chromatin state to promote cancer metastasis. *Nature* **464**, 1071–1076.	37
Douillard, J.-Y. *et al.* Molecular predictors of outcome with gefitinib and docetaxel in previously treated non–small-cell lung cancer: data from the randomized phase III INTEREST trial. *J. Clin. Oncol.* **28**, 744–752.	37
Pece, S. *et al.* Biological and molecular heterogeneity of breast cancers correlates with their cancer stem cell content. *Cell* **140**, 62–73.	37
Wacholder, S. *et al.* Performance of common genetic variants in breast-cancer risk models. *N. Engl. J. Med.* **362**, 986–993.	37
Roth, A.D. *et al.* Prognostic role of KRAS and BRAF in stage II and III resected colon cancer: results of the translational study on the PETACC-3, EORTC 40993, SAKK 60-00 trial. *J. Clin. Oncol.* **28**, 466–474.	36
Yao, J.C. *et al.* Daily oral everolimus activity in patients with metastatic pancreatic neuroendocrine tumors after failure of cytotoxic chemotherapy: a phase II trial. *J. Clin. Oncol.* **28**, 69–76.	36
Park, E.J. *et al.* Dietary and genetic obesity promote liver inflammation and tumorigenesis by enhancing IL-6 and TNF expression. *Cell* **140**, 197–208.	35
Folprecht, G. *et al.* Tumour response and secondary resectability of colorectal liver metastases following neoadjuvant chemotherapy with cetuximab: the CELIM randomised phase 2 trial. *Lancet Oncol.* **11**, 38–47.	35