PTEN Reference List


Pten dose dictates cancer progression in the prostate.


PMID: 14691534 [PubMed - indexed for MEDLINE] PMCID: PMC270016


The assessment of PTEN tumor suppressor gene in combination with Gleason scoring and serum PSA to evaluate progression of prostate carcinoma.

Koksal IT, Dirice E, Yasar D, Sanlioglu AD, Ciftcioglu A, Gulkesen KH, Ozes NO, Baykara M, Luleci G, Sanlioglu S.


Complete loss of PTEN expression as a possible early prognostic marker for prostate cancer metastasis.


Emergence of androgen independence at early
stages of prostate cancer progression in Nkx3.1; Pten mice.
Gao H, Ouyang X, Banach-Petrosky WA, Shen MM, Abate-Shen C.
PMID: 16912166 [PubMed - indexed for MEDLINE]


Murine cell lines derived from Pten null prostate cancer show the critical role of PTEN in hormone refractory prostate cancer development.
PMID: 17616663 [PubMed - indexed for MEDLINE]


Pten inactivation and the emergence of androgen-independent prostate cancer.
Shen MM, Abate-Shen C.
PMID: 17638861 [PubMed - indexed for MEDLINE]


Loss of PTEN is associated with progression to androgen independence.
Bertram J, Peacock JW, Fazli L, Mui AL, Chung SW, Cox ME, Monia B, Gleave ME, Ong CJ.
PMID: 16496415 [PubMed - indexed for MEDLINE]

PTEN activation contributes to tumor inhibition by trastuzumab, and loss of PTEN predicts trastuzumab resistance in patients.


PMID: 15324695 [PubMed - indexed for MEDLINE]


PTEN activity could be a predictive marker of trastuzumab efficacy in the treatment of ErbB2-overexpressing breast cancer.


PMID: 16404430 [PubMed - indexed for MEDLINE]


PTEN activation may contribute to exquisite antitumor response to trastuzumab.

Altundag K, Altundag O, Morandi P, Gunduz M.

PMID: 15767191 [PubMed - indexed for MEDLINE]


Comparing the prognostic value of PTEN and Akt expression with the Mitotic Activity Index in adjuvant chemotherapy-treated node-negative breast cancer patients aged <55 years.
Molecular subclasses of high-grade glioma predict prognosis, delineate a pattern of disease progression, and resemble stages in neurogenesis.


Modeling prognosis for patients with malignant astrocytic gliomas: quantifying the expression of multiple genetic markers and clinical variables.


PTEN-induction in U251 glioma cells decreases the expression of insulin-like growth factor binding protein-2.

Levitt RJ, Georgescu MM, Pollak M.

The prognostic relevance of molecular alterations in glioblastomas for patients age < 50 years.

Korshunov A, Sycheva R, Golanov A.

PMID: 15981281 [PubMed - indexed for MEDLINE]


Molecular determinants of the response of glioblastomas to EGFR kinase inhibitors.


PMID: 16282176 [PubMed - indexed for MEDLINE]

17. Cancer Res. 2007 May 1; 67(9):4467-73.

Phosphatase and tensin homologue deficiency in glioblastoma confers resistance to radiation and temozolomide that is reversed by the protease inhibitor nelfinavir.


PMID: 17483362 [PubMed - indexed for MEDLINE]


Use of an orthotopic xenograft model for
assessing the effect of epidermal growth factor receptor amplification on glioblastoma radiation response.


PMID: 16609043 [PubMed - indexed for MEDLINE]


PTEN and phosphorylated AKT expression and prognosis in early- and late-stage non-small cell lung cancer.


PMID: 17342327 [PubMed - indexed for MEDLINE]


Phosphorylated Akt overexpression and loss of PTEN expression in non-small cell lung cancer confers poor prognosis.

Tang JM, He QY, Guo RX, Chang XJ.

PMID: 16324768 [PubMed - indexed for MEDLINE]


EGR1 predicts PTEN and survival in patients with non-small-cell lung cancer.

Ferraro B, Bepler G, Sharma S, Cantor A, Haura EB.
PTEN expression in non-small-cell lung cancer: evaluating its relation to tumor characteristics, allelic loss, and epigenetic alteration.


PMID: 16084946 [PubMed - indexed for MEDLINE]

Loss of PTEN expression is not uncommon, but lacks prognostic value in stage I NSCLC.

Olaussen KA, Soria JC, Morat L, Martin A, Sabatier L, Morere JF, Khayat D, Spano JP.

PMID: 14981940 [PubMed - indexed for MEDLINE]

Reduction of PTEN protein and loss of epidermal growth factor receptor gene mutation in lung cancer with natural resistance to gefitinib (IRESSA).


PMID: 15870831 [PubMed - indexed for MEDLINE]

PTEN/Akt signaling through epidermal growth factor receptor is prerequisite for angiogenesis by
hepatocellular carcinoma cells that is susceptible to inhibition by gefitinib.

Ueda S, Basaki Y, Yoshie M, Ogawa K, Sakisaka S, Kuwano M, Ono M.

PMID: 16707461 [PubMed - indexed for MEDLINE]


Acquired resistance to erlotinib in A-431 epidermoid cancer cells requires down-regulation of MMAC1/PTEN and up-regulation of phosphorylated Akt.


PMID: 17575145 [PubMed - indexed for MEDLINE]


FISH analysis of 107 prostate cancers shows that PTEN genomic deletion is associated with poor clinical outcome.

Yoshimoto M, Cunha IW, Coudry RA, Fonseca FP, Torres CH, Soares FA, Squire JA.

PMID: 17700571 [PubMed - indexed for MEDLINE]


A functional genetic approach identifies the PI3K pathway as a major determinant of trastuzumab resistance in breast cancer.
Phosphatase and Tensin Homologue Deleted on Chromosome 10 Deficiency Accelerates Tumor Induction in a Mouse Model of ErbB-2 Mammary Tumorigenesis

Nathalie Dourdin, Babette Schade, Robert Lesurf, Michael Hallett, Robert J. Munn, Robert D. Cardiff and William J. Muller

Colorectal Carcinomas and PTEN/MMAC1 Gene Mutations

Giordano Dicuonzo, Silvia Angeletti, Jesus Garcia-Foncillas, Antonio Brugarolas, Yuri Okrouzhnov, Daniele Santini, Giuseppe Tonini, Giulia Lorino, Marina De Cesaris and Alfonso Baldi

The prognostic value of chromosome 7 polysomy in non-small cell lung cancer patients treated with gefitinib.

Buckingham LE, Coon JS, Morrison LE, Jacobson KK, Jewell SS, Kaiser KA, Mauer AM, Muzzafar T, Polowy C, Basu S, Gale M, Villaflor VM, Bonomi P.

PTEN expression is a strong predictor of survival in mesothelioma patients.


PMID: 18248818 [PubMed - in process]


**Pten** Inactivation Accelerates Oncogenic **K-ras**-Initiated Tumorigenesis in a Mouse Model of Lung Cancer

Kentaro Iwanaga1, Yanan Yang1, Maria Gabriela Raso1,2, Lijiang Ma1, Amy E. Hanna1, Nishan Thilaganathan1, Seyed Moghaddam3, Christopher M. Evans3, Huaiguang Li4, Wei-Wen Cai5, Mitsuo Sato7, John D. Minna7, Hong Wu8, Chad J. Creighton6, Francesco J. Demayo3,4, Ignacio I. Wistuba1,2 and Jonathan M. Kurie1

34. Science 1 February 2008: Vol 319. No. 5863, pp. 611-613. DOI:10.1126/science.1152257

Oocyte-Specific Deletion of **Pten** Causes Premature Activation of the Primordial Follicle Pool

Pradeep Reddy,1 Lian Liu,1,2* Deepak Adhikari,1* Krishna Jagarlamudi,1* Singareddy Rajareddy,1* Yan Shen,1 Chun Du,1 Wenli Tang,1 Tuula Hämäläinen,3 Stanford L. Peng,4 Zi-Jian Lan,5 Austin J. Cooney,6 Ilpo Huhtaniemi,3,7 Kui Liu1†

Pten controls lung morphogenesis, bronchioalveolar stem cells, and onset of lung adenocarcinomas in mice.


PMID: 17909629 [PubMed - indexed for MEDLINE]


Up-regulation of PTEN at the transcriptional level is an adverse prognostic factor in female lung adenocarcinomas.


PMID: 17452061 [PubMed - indexed for MEDLINE]


PTEN and PIK3CA expression is associated with prolonged survival after gefitinib treatment in EGFR-mutated lung cancer patients.

Endoh H, Yatabe Y, Kosaka T, Kuwano H, Mitsudomi T.

PMID: 17409929 [PubMed - indexed for MEDLINE]


Frequent inactivation of PTEN by promoter hypermethylation in microsatellite instability-high sporadic colorectal cancers.
39. Modern Pathology (2006) 19, 238–245. doi:10.1038/modpathol.3800525; published online 2 December 2005

The Akt pathway in human breast cancer: a tissue-array-based analysis
Shikha Bose1,3, Sindhu Chandran1, James M Mirocha2 and Namrata Bose1

40. Nature Genetics: Received 30 July; accepted 16 October; published online 9 December 2007; doi:10.1038/ng.2007.39

Recurrent gross mutations of the PTEN tumor suppressor gene in breast cancers with deficient DSB repair
Lao H Saal1,2, Sofia K Gruvberger-Saal1, Camilla Persson3, Kristina Lo¨vgren3, Mervi Jumppanen4,5, Johan Staaf3, Goran Jonsson3, Maira M Pires6, Matthew Maurer1,7, Karolina Holm3, Susan Koujak1, Shivakumar Subramaniyam8, Johan Vallon-Christersson3, Hakan Olsson3, Tao Su9, Lorenzo Memeo10, Thomas Ludwig1,8, Stephen P Ethier11, Morten Krogh12, Matthias Szabolcs8, Vundavalli VVS Murty1,8, Jorma Isola5, Hanina Hibshoosh8,9, Ramon Parsons1,7–9,14 & Ake Borg3,13,14

41. VOLUME 13, NUMBER 1, JANUARY 2007 NATURE MEDICINE

Loss of tumor suppressor PTEN function increases B7-H1 expression and immunoresistance in glioma
Andrew T Parsa1, James S Waldron1, Amith Panner1, Courtney A Crane1, Ian F
**42.** British Journal of Cancer (2007) 97, 1139 – 1145

**PTEN loss of expression predicts cetuximab efficacy in metastatic colorectal cancer patients**

M Frattini*,1,3, P Saletti2,3, E Romagnani2,4, V Martin1, F Molinari1, M Ghisletta1, A Camponovo1, LL Etienne1, F Cavalli2 and L Mazzucchelli1 1Institute of Pathology, via in Selva 24, CH-6600 Locarno, Switzerland; 2Oncology Institute of Southern Switzerland, Ospedale San Giovanni, CH-6500 Bellinzona, Switzerland

**43.** Cancer Cell 12, 395–402, October 2007

**A Functional Genetic Approach Identifies the PI3K Pathway as a Major Determinant of Trastuzumab Resistance in Breast Cancer**

Katrien Berns,1,6 Hugo M. Horlings,2,6 Bryan T. Hennessy,5 Mandy Madiredjo,1 E. Marielle Hijmans,1 Karin Beelen,3 Sabine C. Linn,3 Ana Maria Gonzalez-Angulo,5 Katherine Stemke-Hale,5 Michael Hauptmann,4 Roderick L. Beijersbergen,1 Gordon B. Mills,5 Marc J. van de Vijver,2 and Rene´ Bernards1,*


**PIK3CA Mutation/PTEN Expression Status Predicts Response of Colon Cancer Cells to the Epidermal Growth Factor Receptor Inhibitor Cetuximab**

Minaxi Jhawer1, Sanjay Goel1,2, Andrew J. Wilson1, Cristina Montagna2, Yi-He Ling2,
45. ASCO Annual Meeting 2008

[4003] Evaluation of PTEN expression in colorectal cancer (CRC) metastases (mets) and in primary tumors as predictors of activity of cetuximab plus irinotecan treatment


46. ASCO Annual Meeting 2008

[11075] Analysis of Epidermal Growth Factor Receptor (EGFR) downstream proteins in metastatic colorectal cancer patients: comparison between primary tumor and related metastatic sites

P. Saletti, F. Molinari, V. Martin, A. Bordoni, S. Crippa, L. Mazzucchelli, M. Frattini. Oncology Institute of Southern Switzerland, Bellinzona, Switzerland

47. Int J Oncol. 2007 Nov; 31(5):1157-63

PTEN inactivation in lung cancer cells and the effect of its recovery on treatment with epidermal growth factor receptor tyrosine kinase inhibitors.

Noro R, Gemma A, Miyanaga A, Kosaihira S, Minegishi Y, Nara M, Kokubo Y, Seike M,

**Methylation of the PTEN promoter defines low-grade gliomas and secondary glioblastoma.**


PMID: 17504928 [PubMed - indexed for MEDLINE]


**Epigenetic and genetic alterations of PTEN in hepatocellular carcinoma.**

Wang L, Wang WL, Zhang Y, Guo SP, Zhang J, Li QL.

PMID: 17441812 [PubMed - as supplied by publisher]


**Resistance to Imatinib Mesylate-induced apoptosis in acute lymphoblastic leukemia is associated with PTEN down-regulation due to promoter hypermethylation.**


PMID: 17942153 [PubMed - in process]

51. ASCO Annual Meeting 2008

[16016] Reverse-phase protein array marker
evaluation of protein expression patterns related to anti-angiogenesis treatment in renal cell carcinoma.

D. Tsavachidou, N. M. Tannir, C. Thomas, G. B. Mills, E. Jonasch. University of Texas M. D. Anderson Cancer Center, Houston, TX

52. AACR Annual Meeting 2008

[2773] PTEN LOH induces proliferation and migration of mammary epithelial cells.

Michele I. Vitolo, Michele B. Weiss, Khola Tahir, Ben H. Park, Kurtis E. Bachman, David J. Weber


Activation of the mTOR signaling pathway in breast cancer and its correlation with the clinicopathologic variables.

Noh WC, Kim YH, Kim MS, Koh JS, Kim HA, Moon NM, Paik NS.

PMID: 17805960 [PubMed - in process]


Effect of tumor suppressor gene PTEN on the resistance to cisplatin in human ovarian cancer cell lines and related mechanisms.


PMID: 18657898 [PubMed - as supplied by publisher]

The ErbB signalling pathway: protein expression and prognostic value in epithelial ovarian cancer.

de Graeff P, Crijns AP, Ten Hoor KA, Klip HG, Hollema H, Oien K, Bartlett JM, Wisman GB, de Bock GH, de Vries EG, de Jong S, van der Zee AG.

PMID: 18628764 [PubMed - in process]


Targeted Disruption of Pten in Ovarian Granulosa Cells Enhances Ovulation and Extends the Life Span of Luteal Cells.

Fan HY, Liu Z, Cahill N, Richards JS.

PMID: 18606860 [PubMed - as supplied by publisher]


Suppression of PTEN function increases breast cancer chemotherapeutic drug resistance while conferring sensitivity to mTOR inhibitors.


PMID: 18332865 [PubMed - in process]


An Integrative Genomic and Proteomic Analysis of PIK3CA, PTEN, and AKT Mutations in Breast Cancer
Interphase FISH analysis of PTEN in histologic sections shows genomic deletions in 68% of primary prostate cancer and 23% of high-grade prostatic intra-epithelial neoplasias.


PMID: 16938570 [PubMed - indexed for MEDLINE]

Clinicopathological significance of PTEN loss and the phosphoinositide 3-kinase/Akt pathway in sporadic colorectal neoplasms: is PTEN loss predictor of local recurrence?

Colakoglu T, Yildirim S, Kayaselcuk F, Nursal TZ, Ezer A, Noyan T, Karakayali H, Haberal M.

PMID: 18440486 [PubMed - indexed for MEDLINE]

Identification of a candidate tumour suppressor gene, MMAC1, at chromosome 10q23.3 that is mutated in multiple advanced cancers.
New insights into tumor suppression: PTEN suppresses tumor formation by restraining the phosphoinositide 3-kinase/AKT pathway.

Cantley LC, Neel BG.

The PTEN/MMAC1 tumor suppressor phosphatase functions as a negative regulator of the phosphoinositide 3-kinase/Akt pathway.

Wu X, Senechal K, Neshat MS, Whang YE, Sawyers CL.

Ras signaling and apoptosis.

Downward J.

Transduction of interleukin-2 antiapoptotic and proliferative signals via Akt protein kinase.
Ahmed NN, Grimes HL, Bellacosa A, Chan TO, Tsichlis PN.

PMID: 9108028 [PubMed - indexed for MEDLINE] PMCID: PMC20491


The biology and clinical relevance of the PTEN tumor suppressor pathway.

Sansal I, Sellers WR.

PMID: 15254063 [PubMed - indexed for MEDLINE]


Reduced PTEN expression in breast cancer cells confers susceptibility to inhibitors of the PI3 kinase/Akt pathway.

DeGraffenried LA, Fulcher L, Friedrichs WE, Grünwald V, Ray RB, Hidalgo M.

PMID: 15367412 [PubMed - indexed for MEDLINE]

68. Mod Pathol. 2008 May 23. [Epub ahead of print]

Absence of TMPRSS2: ERG fusions and PTEN losses in prostate cancer is associated with a favorable outcome.

Yoshimoto M, Joshua AM, Cunha IW, Coudry RA, Fonseca FP, Ludkovski O, Zielenska M, Soares FA, Squire JA.

PMID: 18500259 [PubMed - as supplied by publisher]

69. Prostate. 2008 Jun 15; 68(9):935-44.

Restoration of PTEN expression alters the
sensitivity of prostate cancer cells to EGFR inhibitors.
Wu Z, Gioeli D, Conaway M, Weber MJ, Theodorescu D.
PMID: 18386291 [PubMed - indexed for MEDLINE]

70. Proc Natl Acad Sci USA 98:10314-10319, 2001

Enhanced sensitivity of PTEN-deficient tumors to inhibition of FRAP/mTOR
Mehran S. Neshat*,†, Ingo K. Mellinghoff*, Chris Tran*, Bangyan Stiles‡, George Thomas§, Roseann Petersen¶, Philip Frost¶, James J. Gibbons¶, Hong Wu‡, and Charles L. Sawyers*,†,**


An inhibitor of mTOR reduces neoplasia and normalizes p70/S6 kinase activity in Ptten+/− mice


PIK3CA mutations and PTEN loss correlate with similar prognostic factors and are not mutually exclusive in breast cancer.
Pérez-Tenorio G, Alkhori L, Olsson B, Waltersson MA, Nordenskjöld B, Rutqvist LE, Skoog L, Stål O.

**Phase II study of carboplatin and erlotinib (Tarceva, OSI-774) in patients with recurrent glioblastoma.**


PMID: 18581057


**PTEN loss does not predict for response to RAD001 (Everolimus) in a glioblastoma orthotopic xenograft test panel.**


PMID: 18559622


**Antitumor activity of rapamycin in a Phase I trial for patients with recurrent PTEN-deficient glioblastoma.**


PMID: 18215105
Copy number gains in EGFR and copy number losses in PTEN are common events in osteosarcoma tumors.

Freeman SS, Allen SW, Ganti R, Wu J, Ma J, Su X, Neale G, Dome JS, Daw NC, Khoury JD.

PMID: 18704985 [PubMed - as supplied by publisher]

Mutation and allelic loss of the PTEN/MMAC1 gene in primary and metastatic melanoma biopsies.

Birck A, Ahrenkiel V, Zeuthen J, Hou-Jensen K, Guldberg P.

PMID: 10651986 [PubMed - indexed for MEDLINE]

Nuclear PTEN expression and clinicopathologic features in a population-based series of primary cutaneous melanoma.

Whiteman DC, Zhou XP, Cummings MC, Pavey S, Hayward NK, Eng C.

PMID: 11948493 [PubMed - indexed for MEDLINE]

Loss of PTEN promotes tumor development in malignant melanoma.

Stahl JM, Cheung M, Sharma A, Trivedi NR, Shanmugam S, Robertson GP.
PTEN expression in melanoma: relationship with patient survival, Bcl-2 expression, and proliferation.

Epigenetic silencing of the PTEN gene in melanoma.
Mirmohammadsadegh A, Marini A, Nambiar S, Hassan M, Tannapfel A, Ruzicka T, Hengge UR.

Genome-wide loss of heterozygosity and copy number analysis in melanoma using high-density single-nucleotide polymorphism arrays.
Stark M, Hayward N.

Genomic profiling of malignant melanoma using tiling-resolution array CGH.
Mutations in PTEN are frequent in endometrial carcinoma but rare in other common gynecological malignancies.


PTEN mutations and microsatellite instability in complex atypical hyperplasia, a precursor lesion to uterine endometrioid carcinoma.

Levine RL, Cargile CB, Blazes MS, van Rees B, Kurman RJ, Ellenson LH.

PTEN mutation in endometrial cancers is associated with favorable clinical and pathologic characteristics.

Risinger JI, Hayes K, Maxwell GL, Carney ME, Dodge RK, Barrett JC, Berchuck A.

Altered PTEN expression as a diagnostic marker
for the earliest endometrial precancers.
PMID: 10841828 [PubMed - indexed for MEDLINE]


PTEN methylation is associated with advanced stage and microsatellite instability in endometrial carcinoma.
Salvesen HB, MacDonald N, Ryan A, Jacobs IJ, Lynch ED, Akslen LA, Das S.
PMID: 11149415 [PubMed - indexed for MEDLINE]


PTEN mutation located only outside exons 5, 6, and 7 is an independent predictor of favorable survival in endometrial carcinomas.
PMID: 11555573 [PubMed - indexed for MEDLINE]


PTEN expression is associated with prognosis for patients with advanced endometrial carcinoma undergoing postoperative chemotherapy.
PMID: 12209607 [PubMed - indexed for MEDLINE]
Significance of PTEN alterations in endometrial carcinoma: a population-based study of mutations, promoter methylation and PTEN protein expression.

Salvesen HB, Stefansson I, Kretzschmar EI, Gruber P, MacDonald ND, Ryan A, Jacobs IJ, Akslen LA, Das S.

PMID: 15547698 [PubMed - indexed for MEDLINE]

Lack of PTEN expression in endometrial intraepithelial neoplasia is correlated with cancer progression.


PMID: 15948123 [PubMed - indexed for MEDLINE]

High frequency of coexistent mutations of PIK3CA and PTEN genes in endometrial carcinoma.

Oda K, Stokoe D, Taketani Y, McCormick F.

PMID: 16322209 [PubMed - indexed for MEDLINE]

The relationship between microsatellite
instability and PTEN gene mutations in endometrial cancer.


PMID: 16506206 [PubMed - indexed for MEDLINE]


PIK3CA gene mutations in endometrial carcinoma: correlation with PTEN and K-RAS alterations.


PMID: 16949921 [PubMed - indexed for MEDLINE]


Loss of phosphatase and tensin homologue deleted on chromosome 10 and phosphorylation of mammalian target of rapamycin are associated with progesterone refractory endometrial hyperplasia.

Milam MR, Soliman PT, Chung LH, Schmeler KM, Bassett RL Jr, Broaddus RR, Lu KH.

PMID: 17466036 [PubMed - indexed for MEDLINE]


Consequences of the loss of p53, RB1, and PTEN: relationship to gefitinib resistance in endometrial cancer.
Albitar L, Carter MB, Davies S, Leslie KK.
PMID: 17490733 [PubMed - indexed for MEDLINE]


Athanassiadou P, Athanassiades P, Grapsa D, Gonidi M, Athanassiadou AM, Stamati PN, Patsouris E.
PMID: 17504383 [PubMed - indexed for MEDLINE]


PI3KCA/PTEN deregulation contributes to impaired responses to cetuximab in metastatic colorectal cancer patients.

PMID: 18669866 [PubMed - as supplied by publisher]


Predictive value of PTEN and AR coexpression of sustained responsiveness to hormonal therapy in prostate cancer--a pilot study.

El Sheikh SS, Romanska HM, Abel P, Domin J, Lalani el-N.
PMID: 18714395 [PubMed - in process]

PTEN/MMAC1 mutations in hepatocellular carcinomas.
Yao YJ, Ping XL, Zhang H, Chen FF, Lee PK, Ahsan H, Chen CJ, Lee PH, Peacocke M, Santella RM, Tsou HC.
PMID: 10340391 [PubMed - indexed for MEDLINE]


Expression and prognostic role of tumor suppressor gene PTEN/MMAC1/TEP1 in hepatocellular carcinoma.
Hu TH, Huang CC, Lin PR, Chang HW, Ger LP, Lin YW, Changchien CS, Lee CM, Tai MH.
PMID: 12673720 [PubMed - indexed for MEDLINE]


Expression and significance of new tumor suppressor gene PTEN in primary liver cancer.
Dong-Dong L, Xi-Ran Z, Xiang-Rong C.
PMID: 12767263 [PubMed - indexed for MEDLINE]


Hepatocyte-specific Pten deficiency results in steatohepatitis and hepatocellular carcinomas.
PMID: 15199412 [PubMed - indexed for MEDLINE], PMCID: PMC420505

**MicroRNA-21 regulates expression of the PTEN tumor suppressor gene in human hepatocellular cancer.**

Meng F, Henson R, Wehbe-Janek H, Ghoshal K, Jacob ST, Patel T.


**Non-alcoholic steatohepatitis and hepatocellular carcinoma: lessons from hepatocyte-specific phosphatase and tensin homolog (PTEN)-deficient mice.**

Watanabe S, Horie Y, Kataoka E, Sato W, Dohmen T, Ohshima S, Goto T, Suzuki A.

PMID: 17567478 [PubMed - indexed for MEDLINE]


**Expression of PTEN, PPM1A and P-Smad2 in hepatocellular carcinomas and adjacent liver tissues.**

Wu SK, Wang BJ, Yang Y, Feng XH, Zhao XP, Yang DL.

PMID: 17729405 [PubMed - indexed for MEDLINE]


**Down-regulation of tumor suppressor gene PTEN, overexpression of p53, plus high proliferating cell nuclear antigen index predict poor patient outcome of hepatocellular carcinoma after**
resection.
PMID: 17982625 [PubMed - indexed for MEDLINE]


**MicroRNA expression profiling in human ovarian cancer: miR-214 induces cell survival and cisplatin resistance by targeting PTEN.**
PMID: 18199536 [PubMed - indexed for MEDLINE]


**Alternate molecular genetic pathways in ovarian carcinomas of common histological types.**
Willner J, Wurz K, Allison KH, Galic V, Garcia RL, Goff BA, Swisher EM.
PMID: 17258789 [PubMed - indexed for MEDLINE]


**Over-expression of PTEN sensitizes human ovarian cancer cells to cisplatin-induced apoptosis in a p53-dependent manner.**
Yan X, Fraser M, Qiu Q, Tsang BK.
PMID: 16545436 [PubMed - indexed for MEDLINE]

PTEN and p53 expression in primary ovarian carcinomas: immunohistochemical study and discussion of pathogenetic mechanisms.

Gomes CP, Andrade LA.

PMID: 16515600 [PubMed - indexed for MEDLINE]


Activation of PI3K/Akt pathway by PTEN reduction and PIK3CA mRNA amplification contributes to cisplatin resistance in an ovarian cancer cell line.

Lee S, Choi EJ, Jin C, Kim DH.

PMID: 15790433 [PubMed - indexed for MEDLINE]


Overexpression of PTEN increases sensitivity to SN-38, an active metabolite of the topoisomerase I inhibitor irinotecan, in ovarian cancer cells.


PMID: 12006545 [PubMed - indexed for MEDLINE]


Disparate expression of the PTEN gene: a novel finding in B-cell chronic lymphocytic leukaemia (B-CLL).

Leupin N, Cenni B, Novak U, Hügli B, Graber HU, Tobler A, Fey MF.

Phosphatase and tensin homologue phosphorylation in the C-terminal regulatory domain is frequently observed in acute myeloid leukaemia and associated with poor clinical outcome.

Cheong JW, Eom JI, Maeng HY, Lee ST, Hahn JS, Ko YW, Min YH.


PTEN reverses MDM2-mediated chemotherapy resistance by interacting with p53 in acute lymphoblastic leukemia cells.

Zhou M, Gu L, Findley HW, Jiang R, Woods WG.


Pten dependence distinguishes haematopoietic stem cells from leukaemia-initiating cells.

Yilmaz OH, Valdez R, Theisen BK, Guo W, Ferguson DO, Wu H, Morrison SJ.


PTEN maintains haematopoietic stem cells and acts in lineage choice and leukaemia prevention.

**The role of the PTEN/AKT Pathway in NOTCH1-induced leukemia.**

Palomero T, Dominguez M, Ferrando AA.

PMID: 18414037 [PubMed - in process]


**Intragenic PTEN/MMAC1 loss of heterozygosity in conventional (clear-cell) renal cell carcinoma is associated with poor patient prognosis.**

Velickovic M, Delahunt B, Mclver B, Grebe SK.

PMID: 12011252 [PubMed - indexed for MEDLINE]


**Using tumor markers to predict the survival of patients with metastatic renal cell carcinoma.**


PMID: 1582


**Prognostic relevance of the mTOR pathway in renal cell carcinoma: implications for molecular**
patient selection for targeted therapy.


PMID: 17440983 [PubMed - indexed for MEDLINE]


PTEN and p27Kip1 are not downregulated in the majority of renal cell carcinomas--implications for Akt activation.


PMID: 18425369 [PubMed - indexed for MEDLINE]


Co-existence of high levels of the PTEN protein with enhanced Akt activation in renal cell carcinoma.


PMID: 17681738 [PubMed - indexed for MEDLINE]


PTEN expression in renal cell carcinoma and oncocytoma and prognosis.


PMID: 17886097 [PubMed - indexed for MEDLINE]

128. PNAS September 2, 2008 Vol. 105, No. 35, 13057-13062. doi:
PTEN-deficient cancers depend on PIK3CB

Susan Wee*,†, Dmitri Wiederschain*,†,‡, Sauveur-Michel Maira†,§, Alice Loo*, Christine Miller*, Rosalie deBeaumont*, Frank Stegmeier*, Yung-Mae Yao*, and Christoph Lengauer*,¶


PTEN and myotubularin: novel phosphoinositide phosphatases.

Maehama T, Taylor GS, Dixon JE.

PMID: 11395408 [PubMed - indexed for MEDLINE]


Inhibition of cell migration, spreading, and focal adhesions by tumor suppressor PTEN.

Tamura M, Gu J, Matsumoto K, Aota S, Parsons R, Yamada KM.

PMID: 9616126 [PubMed - indexed for MEDLINE]


Phosphorylation of the PTEN tail regulates protein stability and function.

Vazquez F, Ramaswamy S, Nakamura N, Sellers WR.

PMID: 10866658 [PubMed - indexed for MEDLINE] PMCID: PMC85951


Crystal structure of the PTEN tumor suppressor:
impllications for its phosphoinositide phosphatase activity and membrane association.


PMID: 10555148 [PubMed - indexed for MEDLINE]


Inhibition of Activated Fibroblast Growth Factor Receptor 2 in Endometrial Cancer Cells Induces Cell Death Despite PTEN Abrogation

Sara A. Byron¹, Michael G. Gartside¹, Candice L. Wellens¹, Mary A. Mallon³, Jack B. Keenan¹, Matthew A. Powell², Paul J. Goodfellow²,³ and Pamela M. Pollock¹


FBXW7 Targets mTOR for Degradation and Cooperates with PTEN in Tumor Suppression

Differential sensitivity of human glioblastoma LN18 (PTEN-positive) and A172 (PTEN-negative) cells to Taxol for apoptosis.

Zhang R, Banik NL, Ray SK


Lovastatin enhances gefitinib activity in glioblastoma cells irrespective of EGFRvIII and PTEN status.

Cemeus C, Zhao TT, Barrett GM, Lorimer IA, Dimitroulakos J.


PTEN posttranslational inactivation and hyperactivation of the PI3K/Akt pathway sustain primary T cell leukemia viability

Ana Silva, J. Andrés Yunes, Bruno A. Cardoso, Leila R. Martins, Patrícia Y. Jotta, Miguel Abecasis, Alexandre E. Nowill, Nick R. Leslie, Angelo A. Cardoso and Joao T. Barata

139. Cancer. 2008 Oct 2 Epub

Association of PTEN gene methylation with genetic alterations in the phosphatidylinositol 3-kinase/ AKT signaling pathway in thyroid tumors.

Reduced Erlotinib Sensitivity of Epidermal Growth Factor Receptor-Mutant Non–Small Cell Lung Cancer following Cisplatin Exposure: A Cell Culture Model of Second-line Erlotinib Treatment

Tan Min Chin, Margaret P. Quinlan, Anurag Singh, Lecia V. Sequist, Thomas J. Lynch, Daniel A. Haber, Sreenath V. Sharma and Jeffrey Settleman


Phosphatidylinositol 3-Kinase Hyperactivation Results in Lapatinib Resistance that Is Reversed by the mTOR/Phosphatidylinositol 3-Kinase Inhibitor NVP-BEZ235

Pieter J.A. Eichhorn,1 Magu¨i Gili,1 Maurizio Scaltriti,1 Violeta Serra,1 Marta Guzman,1 Wouter Nijkamp,2 Roderick L. Beijersbergen,2 Vanesa Valero,1 Joan Seoane,1,3,4Rene´ Bernards,2 and Jose´ Baselga1,3


Phase II Study of Predictive Biomarker Profiles for Response Targeting Human Epidermal Growth Factor Receptor 2 (HER-2) in Advanced Inflammatory Breast Cancer With Lapatinib Monotherapy

Stephen Johnston, Maureen Trudeau, Bella Kaufman, Hamouda Boussen, Kimberley Blackwell, Patricia LoRusso, Donald P. Lombardi, Slim Ben Ahmed, Dennis L. Citrin,
143. Cancer Res. 2007 Feb 1;67(3):1170-5.

Lapatinib antitumor activity is not dependent upon phosphatase and tensi homologue deleted on chromosome 10 in ErbB2 overexpressing breast cancers.


144. San Antonio Breast Cancer Symposium Dec. 2008 abstract 34

PI3 kinase activation and response to trastuzumab or lapatinib in HER-2 overexpressing locally advanced breast cancer (LABC).

Migliaccio I, Gutierrez MC, Wu M-F, Wong H, Pavlick A, Hilsenbeck SG, Horlings HM, Rimawi M, Berns K, Bernards R, Osborne CK, Arteaga CL, Chang JC Baylor College of Medicine, Houston, TX; Vanderbilt University, Nashville, TN; Netherlands

145. Gynecol Oncol. 2009 Jan 14. [Epub ahead of print]

Prognostic value and clinicopathological significance of p53 and PTEN in epithelial ovarian cancers.

Lee YK, Park NH.
PIK3CA Mutations in Colorectal Cancer Are Associated with Clinical Resistance to EGFR-Targeted Monoclonal Antibodies

Andrea Sartore-Bianchi, Miriam Martini, Francesca Molinari, Silvio Veronese, Michele Nichelatti, Salvatore Artale, Federica Di Nicolantonio, Piercarlo Saletti, Sara De Dosso, Luca Mazzucchelli, Milo Frattini, Salvatore Siena and Alberto Bardelli

PTEN Loss Contributes to Erlotinib Resistance in EGFR Mutant Lung Cancer by Activation of Akt and EGFR.


PI3K Pathway Activation Mediates Resistance to MEK Inhibitors in KRAS Mutant Cancers

Susan Wee, Zainab Jagani, Kay Xiaqin Xiang, Alice Loo, Marion Dorsch, Yung-Mae Yao, William R. Sellers, Christoph Lengauer, and Frank Stegmeier
PTEN genomic deletion is associated with p-Akt and AR signaling in poorer outcome hormone refractory prostate cancer.


Aberrant ERG expression cooperates with loss of PTEN to promote cancer progression in the prostate.


Cooperativity of TMPRSS2-ERG with PI3-kinase pathway activation in prostate oncogenesis.