

Targeting the molecules useful for the diagnosis and treatment of endometrial cancers

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2007 Fiscal Year Final Research Report Summary

Targeting the molecules useful for the diagnosis and treatment of endometrial cancers

Research Project

Project/Area Number

17390448

Research Category

Grant-in-Aid for Scientific Research (B)

Allocation Type

Single-year Grants

Section

一般

Research Field

Obstetrics and gynecology

Research Institution

Kanazawa University

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2005 – 2007

Keywords

Molecular carcinogenesis / Molecular targets / Endometrial cancer / Therapeutic agent / Prognostic Markers

Research Abstract

Endometrial cancer is the second most common gynecological malignancy and its incidence has increased dramatically over the last decade in Japan. Although the surgical and chemotherapeutic treatments for endometrial cancers are well-established, the need for molecular-target therapy has increased, especially for recurrent and/or radio- or chemo-resistant diseases. Thus there is a need for a better understanding of the molecular pathway of endometrial carcinogens.

The most frequent genetic abnormalities are mutations in PTEN and ERAS. A PTEN mutation and ERAS mutation activates the PI3K pathway and ERK - MAP pathway, respectively. In the present study using the clinical samples, there is no significant association between KRAS or BRAF and p-ERK1/2 expression. Patients with low expression have a favorable prognosis. Thus, the activation of ERK1/2 occurs in a ERAS and BRAF I dependent manner in endometrial cancer. A High level of p-AKT expression was observed in approximately 60% of endometrial cancers. It occurs independently of both PTEN mutations and PIK3CA mutations. Furthermore, p-AKT expression did not correlated with expression of potential downstream targets such as p-mTOR and/or p TORO 1/3a. The high-expression of p-AKT was strongly associated with ERK. The present study revealed the presence of complex signaling pathways other than the conventional carcinogenic pathway. The molecular targeting for the diagnosis and treatment of endometrial cancers is a long way for the success.

Research Products (37 results)

	All	2007	2006	2005	Other
	All	Journal Article (34 results) (of which Peer Reviewed: 17 results)		Presentation (1 results)	Book (2 results)
[Journal Article] Activation of ERK1/2 occurs independently of KRas orBraf status in endometrial cancer and is associated with favorable prognosis.		2007			▼
[Journal Article] Analysis of outcome of stage I-III endometrial cancer treated with systematic operation omitting paraaortic lymphadenectomy		2007			▼
[Journal Article] Activation of ERK1/2 occurs independently of KRas orBraf status in endometrial cancer and is associated with favorable prognosis		2007			▼
[Journal Article] Creation of tumorigenic human endometrial epithelial cells with intact chromosomes by introducing defined genetic elements.			2006		▼
[Journal Article] High Twist expression in involved in infiltrative endometrial cancer and affects patient survival.			2006		▼
[Journal Article] The evaluation of human papilloma Virus DNA testing in primary screening for cervical lesions in a large Japanese population.			2006		▼
[Journal Article] Expression of Tn and Sialy-Tn antigens in endometrial cancer. Its relationship with tumor-produced cyclooxygenase-2, tumor-infiltrated lymphocytes and patients prognosis.			2006		▼
[Journal Article] Distinct telomere length regulation in premalignant cervical and endometrial lesions: implicationsfor the roles of telomeres in uterine carcinogenesis.			2006		▼
[Journal Article] Novel function single nucleotide polyphisms in the latent TGF-binding protein1-L(LTBP-1L)Promoter. Effect on LTBP-1L expression level and possible prognostic significance in ovarian cancer.			2006		▼
[Journal Article] Creation of tumorigenic human endometrial epithelial cells with intact chromosomes by introducing defined genetic elements			2006		▼
[Journal Article] High Twist expression in involved in infiltrative endometrial, cancer and affects patient survival			2006		▼
[Journal Article] The evaluation of human papillomaVirus DNA testing in primary screening for cervical lesions in a large Japanese population			2006		▼
[Journal Article] Expression of Tn and Sialy-Tn antigens in endometrial cancer. Its relationship with tumor-produced cyclooxygenase-2, tumor-infiltrated lymphocytes and patients prognosis			2006		▼
[Journal Article] Distinct telomere length regulation in premalignant cervical and endometrial lesions : implicationsfor the roles of telomeres in uterine carcinogenesis			2006		▼
[Journal Article] Novel function single nucleotide polyphisms in the latent TGF-binding protein1-L(LTBP-1L) Promoter. Effect on LTBP-1L expression level and possible prognostic significance in ovarian cancer			2006		▼
[Journal Article] Role of cyclooxygenase-2 in immunomodulation and prognosis of endometrial carcinoma.			2005		▼
[Journal Article] Pharmacokinetics of paclitaxel in ovarian cancer patients and genetic polymorphisms of CYP2C8, CYP3A4, and MDR1			2005		▼

[Journal Article] Efficient inhibition of human telomerase reverse transcriptase expression by RNA interference sensitizes cancer cells to ionizing radiation and chemotherapy.	2005 ▼
[Journal Article] Analysis of telomerase single-strand overhang in human endometrial cancers.	2005 ▼
[Journal Article] Association of mismatch repair deficiency with PTEN frameshift mutations in endometrial cancers and the precursors in a Japanese population	2005 ▼
[Journal Article] Wright WE, Shay JW. The function of AP1 on transcription of telomerase reverse transcriptase gene(TERT)in human and mouse cell.	2005 ▼
[Journal Article] Aromatase expression in stromal cells of endometrioid endometrial cancer correlates with poor survival.	2005 ▼
[Journal Article] K. ADAMTS-1 is involved in normal follicular development, ovulatory process and organization of the medullary vascular network in the ovary.	2005 ▼
[Journal Article] Role of cyclooxygenase-2 in immunomodulation and prognosis of endometrial carcinoma	2005 ▼
[Journal Article] Pharmacokinetics of paclitaxel in ovarian cancer patients and genetic polymorphisms of CYP2C8, CYP3A4, and MDRI	2005 ▼
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[Journal Article] Association of mismatch repair deficiency with PTEN frameshift mutations in endometrial cancers and the precursors in a Japanese population	2005 ▼
[Journal Article] The function of API on transcription of telomerase reverse transcriptase gene (TERT) in human and mouse cell	2005 ▼
[Journal Article] Aromatase expression in stromal cells of endometrioid endometrial cancer correlates with poor survival	2005 ▼
[Journal Article] ADAMTS-1 is involved in normal follicular development, ovulatory process and organization of the medullary vascular network in the ovary	2005 ▼
[Journal Article] Analysis of outcome of stage I-III endometrial cancer treated with systematic operation omitting paraaortic lymphadenectomy.	▼
[Journal Article] Establishment of long-term culture model to study endometrial biology and carcinogenesis.	▼
[Journal Article] Establishment of long-term culture model to study endometrial biology and carcinogenesis	▼
[Presentation] Cervical Cancer Screening with Combination of Pap and HPV DNA tests	2005 ▼
[Book] 10代からのがん予防	2007 ▼
[Book] 症例から学ぶ 婦人科腫瘍学入門	2005 ▼

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