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Observational Study

Mutational analysis of Ras hotspots in urothelial carcinoma of bladder patients

Tripathi K *et al.* Ras mutations in UCB

Kiran Tripathi, Apul Goel, Atin Singhai, Minal Garg

Abstract

BACKGROUND

Mutational activation of *Ras* genes is established as a prognostic factor for the genesis of a constitutively active RAS-mitogen activated protein kinase pathway that leads to cancer. Heterogeneity among the distribution of the most frequent mutations in *Ras* isoforms is reported in different patients' populations with urothelial carcinoma of bladder (UCB).

AIM

To examine the patients for the presence/absence of mutations in *Ras* isoforms order to prognose the disease clinical outcome.

Match Overview

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1	Internet crawled on 02-Aug-2013 www.urologyjournal.org	94 words	2%
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Mutational analysis of hot spot regions of K-Ras, H-Ras &



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A comprehensive survey of Ras mutations in cancer

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3354961>

May 15, 2012 - N-Ras favours similar types of mutations at codons 12 and 13 albeit at much lower rates than K-Ras. In contrast, H-Ras favours G12V in all cancers with codon 12 mutations and more generally exhibits a 3-fold higher proportion of transversion to transition mutations compared to K-Ras and N-Ras.

Cited by: 1028

Author: Ian A. Prior, Paul D. Lewis, Carla Mattos

Publish Year: 2012

Rapid detection of K-, N-, H-RAS, and BRAF hotspot ...

<https://www.sciencedirect.com/science/article/pii/S0009912013002828>

Initially, we used nine different-sized N-RAS and BRAF primers to detect base changes in codons 12, 13, and 61 of the N-RAS gene and codon 600 of the BRAF gene. Subsequently, we used seven different-sized K-RAS and H-RAS primers to separately detect base changes in codons 12, 13, and 61 of the K-RAS and H-RAS genes.

Cited by: 3

Author: Ya-Sian Chang, I-Ling Lin, Kun-Tu Yeh, J...

Publish Year: 2013

Mutational analyses of the BRAF, KRAS, and PIK3CA genes in ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2987741>



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[H-RAS mutation is a key molecular feature of pediatric ...](https://www.ncbi.nlm.nih.gov/pubmed/26522772)

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However, we propose that **H-RAS mutation analysis** could be performed on **urothelial bladder tumors of pediatric patients**. The knowledge in the **molecular basis of urothelial bladder tumors** in children opens a promising field which could lead us to establish different guidelines for surveillance and follow-up of **pediatric urothelial bladder cancer patients**.

Cited by: 6

Author: Mireia Castillo-Martin, Ana Collazo Lor...

Publish Year: 2016

[Clinical Significance of Hotspot Mutation Analysis of ...](https://frontiersin.figshare.com/collections/Clinical_Significance_of_Hotspot_Mutation...)

https://frontiersin.figshare.com/collections/Clinical_Significance_of_Hotspot_Mutation...

Recent studies showed the clinical utility of next-generation sequencing of urinary cell-free DNA (cfDNA) from **patients with urothelial bladder cancer (UBC)**. In this study, we aimed to develop urinary cfDNA **analysis** by droplet digital PCR (ddPCR) as a high-throughput and rapid assay for UBC detection and prognosis. We analyzed urinary cfDNA of 202 samples from 2 ...

[H-RAS mutation is a key molecular feature of pediatric ...](https://www.sciencedirect.com/science/article/pii/S147751311500368X)

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FGFR3, **H-RAS**, and PI3K **hotspots mutational analyses** were conducted by polymerase chain reaction amplification and Sanger sequencing from the FFPE tissue blocks. **IHC analysis** was conducted using antibodies against p53, PTEN, RB, EGFR, and HER2. **Proliferative rate** was assessed by Ki-67 expression.

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[H-RAS mutation is a key molecular feature of pediatric ...](#)

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[\(PDF\) Clinical Significance of Hotspot Mutation Analysis ...](#)

<https://www.researchgate.net/publication/341496431...>

We performed **ddPCR analysis of hotspot gene mutations** (TERT promoter and FGFR3). In the **test cohort**, the sensitivity of **urinary cfDNA diagnosis** was 68.9% (51/74) and the specificity was 100% in...

[FGFR3, HRAS, KRAS, NRAS and PIK3CA Mutations in Bladder ...](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2972209>

Nov 03, 2010 · However, there is no information on the prognostic value of **mutations** in the three **RAS genes in bladder cancer**. We have recently shown that with FGFR3 **mutation analysis** on **urine samples from bladder cancer patients** it was possible to detect recurrent tumors , ...

Cited by: 217

Author: Lucie C. Kompier, Irene Lurkin, Madelon ...

Publish Year: 2010

[Non-Coding Mutations in Urothelial Bladder Cancer ...](#)