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Information about cancer-associated genes

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Abstract

The tumor gene database is a searchable database of information on over 300 known tumor genes. The information is broken down into 'fact' headings for each gene.

Content

The tumor gene database is a searchable database of information on over 300 known tumor genes. The information is broken down into 'fact' headings for each gene. Under each fact heading is a list of pertinent facts with a link to the original source used to obtain the fact. For the vast majority of these facts, the link is to a paper in the literature. For example, a search for p53 yields 'transcription factor' under the fact heading 'biochemical type' and 'alters bax expression in oral keratinocyte cell lines' under the fact heading 'function' as well as many more pages of fact headings and links.

Navigation

There are three types of searches available: a search by gene or locus name; a search by fact heading; and a unified search which incorporates aspects of both searches. No Boolean searches are yet available, which can make refining a search somewhat difficult. Nonetheless, the searching is straightforward and yields a wealth of information about the genes available in the database. There is also a clickable pie-chart in the upper right hand corner of the website homepage that lists several common types of cancers. But clicking on the individual pieces of the pie, which represent the types of cancer, does not provide specific information. This would be an addition to the site that would certainly enhance it.

Reporter's comments

Timeliness

The site seems to be very much a work in progress, which is not surprising given the amount of data available about tumor genes. It is unclear how often the site is updated, either with additions to the list of genes or with new information pertaining to the genes. Many of the links to the literature are to older papers (pre-1996), which may indicate that updates are not frequent.

Best feature

This is a very useful site with a lot of information on most of the major genes involved in cancer. Clearly the collection of all of this information in a single searchable index is incredibly useful. Also, searching the gene names with nothing returns the entire list of genes available in the database. Each of the listed genes has a link to the full collection of facts with which it is associated. However, the degree of information coverage is not uniform and varies from gene to gene. For example p53 contains at least 20 separate facts under each of the headings 'clinical', 'function', and 'frequency, tumors' as well as numerous other facts. In contrast, there is not even a 'clinical' fact heading under Src. This may reflect the available information, or indicate that the database is still very rudimentary.

Worst feature

The biggest problem I had with the site is that it often feels like an information dump. There is no further organization beyond that already described, and often it feels as though you are looking at a list of facts. I would have found it very helpful if perhaps each tumor gene were more clearly placed in a particular context with regard to tumor etiology, related genes, and interacting genes in a particular pathway.

Wish list

A wonderful addition to this site would be a table or index for each gene indicating other (tumor) genes with which it interacts and the way that this interaction contributes to tumor formation.

Related websites

A nice feature of this web site is that each of the genes in the database also has a link to the relevant entry in the [GeneCards: human genes, maps, proteins and diseases](#) website (see related report - *Genome Biology* 1(3):reports2049)

Table of links

[The tumor gene database](#)

[GeneCards: human genes, maps, proteins and diseases](#)

[Genome *Biology* 1\(3\):reports2049](#)

References

1. [The tumor gene database.](#)