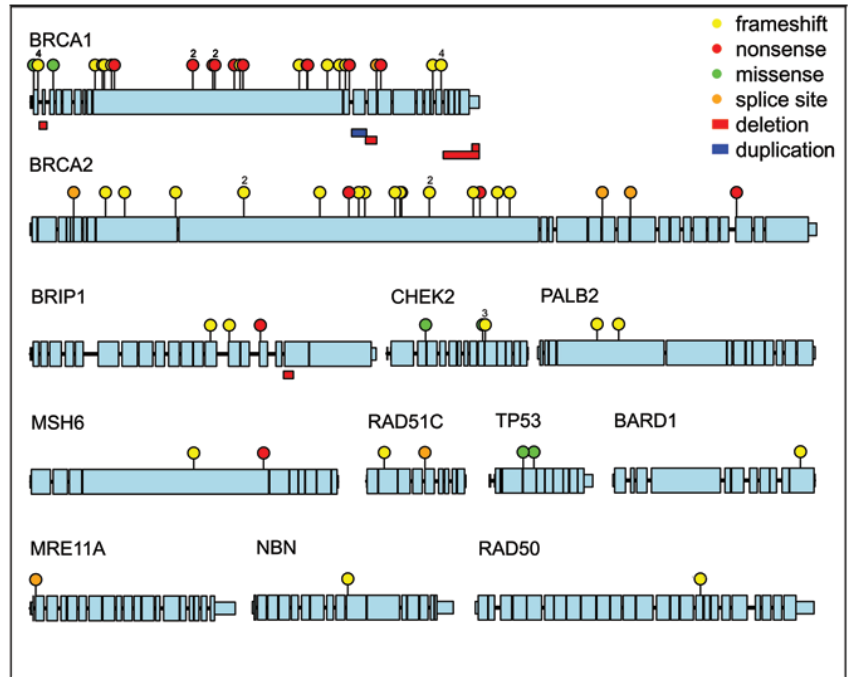


Identifying inherited risks for ovarian cancer

Ovarian cancer is among the most deadly of malignancies, partly because it is difficult to detect cases at early stages when treatments are more effective.

Inherited loss-of-function mutations in *BRCA1* and *BRCA2* genes are known to increase the risk of ovarian cancer by as much as 50%, although the fraction of ovarian cancer cases that are due to these and other inherited mutations is not known. Tom Walsh et al. (pp. 18032–18037) analyzed DNA from 360 women with primary ovarian, peritoneal, or fallopian tube carcinomas for germline mutations in 21 tumor suppressor genes, including *BRCA1*, *BRCA2*, and other genes known to cause inherited ovarian or breast cancer. The authors found that 24% of the ovarian cancer samples contained germline loss-of-function mutations in tumor suppressor genes—a much larger fraction than previously thought. Furthermore, the team identified six genes that have not been previously associated with inherited ovarian cancer. Of women with inherited mutations, more than 30% had no family history of breast or ovarian cancer. The results suggest that more patients with ovarian cancer may carry inherited cancer-predisposing mutations, and in more genes, than previously thought. The findings may lead to the development of genetic tests that better determine who is at risk for ovarian cancer, according to the authors. — N.Z.



Genes harboring germline loss-of-function mutations in patients with primary ovarian, fallopian tube, or peritoneal cancers.

Evaluating financial risk

Prevailing economic models of credit risk assume that price fluctuations form a bell-shaped curve, with very large fluctuations essentially never occurring. But during financial crises, wild fluctuations occur more frequently than these models predict. Boris Podobnik et al. (pp. 17883–17888) developed a method to incorporate these fluctuations in their analysis of financial data from 488 publicly traded manufacturing firms for each quarter from 2000–2009. The researchers used multiple types of known calculations to analyze financial data such as the ratio of working capital to total assets, and sales divided by total assets. These

data were plugged into multiple ratio calculations to estimate credit risk for the companies. Particular attention was paid to the years 2007–2009, a time of overall financial crisis. According to the authors, the results suggest that even during stock market crashes, the basic dynamics that

underlie less volatile periods still govern credit risk. The study revealed that credit risk follows slowly decaying functional form, implying that dangerous credit positions are more likely than is commonly believed. According to the authors, the credit rating approach may help improve the estimation of credit risk, particularly in the event that financial services companies respond slowly to changes in corporate credit quality, as recent surveys report. — J.V.



Real-time quotes at the stock exchange.

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