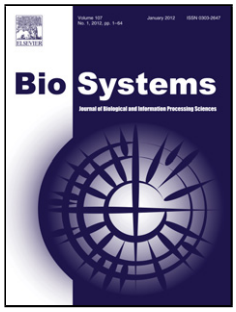

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CM-viewer: visualizing interaction network of co-mutated and mutually exclusively mutated cancer genes

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Abstract

Cancer genes usually play a crucial role in regulating cell growth. Normal cells transform into malignant tumors by the acquisition of accumulated genetic mutations that enable them to evade normal growth control. It is therefore important to understand the relationships between mutations during cancer development and progression. Although cancer genes with co-occurring and mutually exclusive mutations have already been studied on different scales, there is no timely updated interaction network available for co-mutated and mutually exclusively mutated cancer genes. Therefore, we firstly downloaded 567 cancer genes from COSMIC (catalogue of somatic mutations in cancer) cancer gene census. Secondly, somatic mutations of 71 cancer genomics projects were downloaded from the ICGC (International Cancer Genome Consortium) data portal. Thirdly, mutated cancer genes and affected donors were