**Supplementary table legend**

Supplementary table 1. A summary of samples used in this study. Sheet 1 summarizes the number of cases and fusions in each cancer type. The second data sheet gives all case IDs, and the third data sheet contains a list of 321 fusions we curated from three public resources. Each fusion on the list has support from at least three publications.

Supplementary table 2. All fusions in the tumor fusion portal as of Oct 1, 2017. Sheet 1 contains post filter cancer fusions (n=20,731). Sheet 2 contains 3,838 fusions we found in 641 non-neoplastic samples. Sheet 3 presents the percentage of recurrent fusions in each cancer type.

Supplementary table 3. Effectiveness of filters. This table describes the number of fusions filtered out by each filter. Green cells are the numbers of fusions retained after filtering, whereas the grey cells are the numbers filtered out.