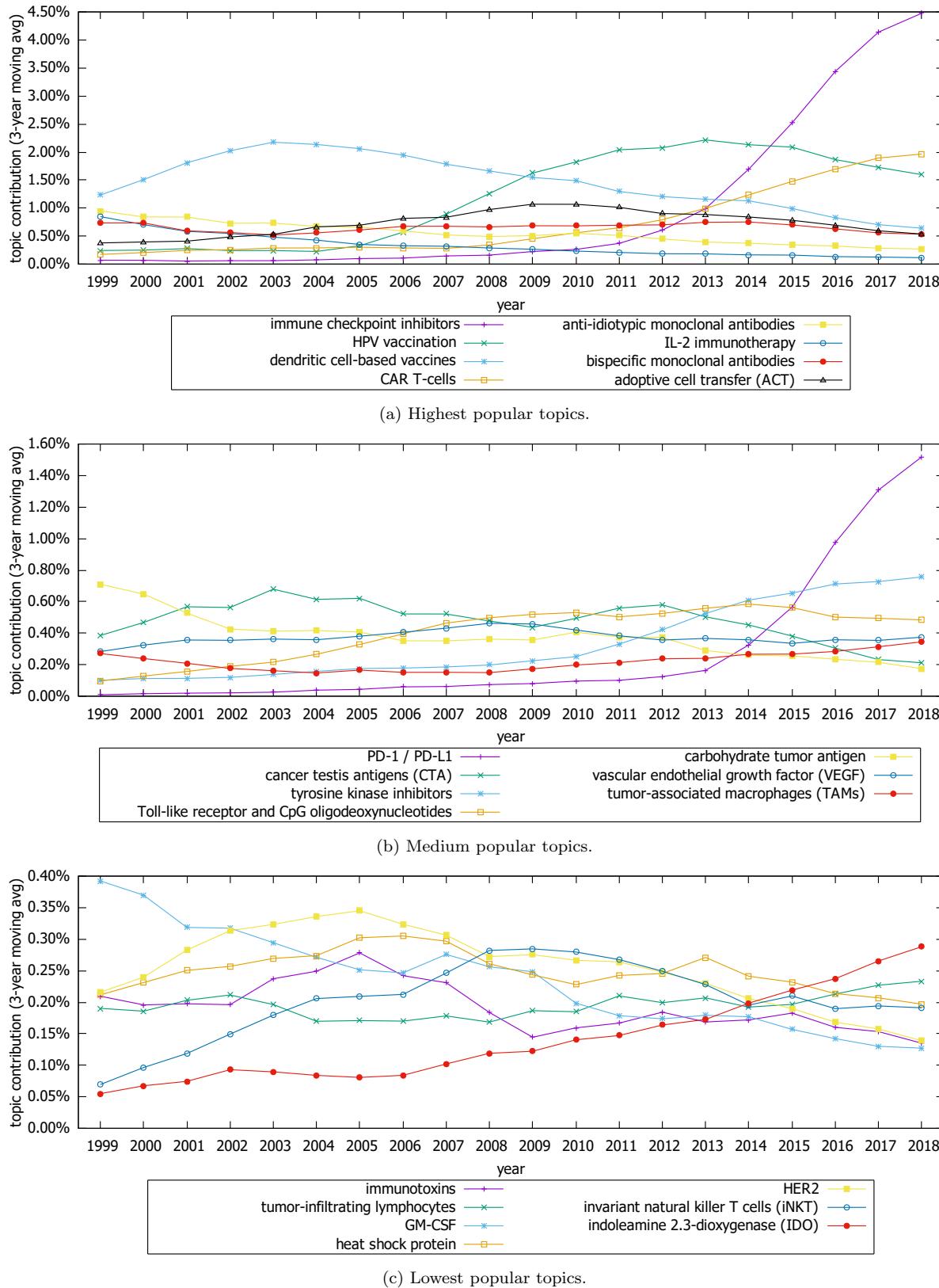
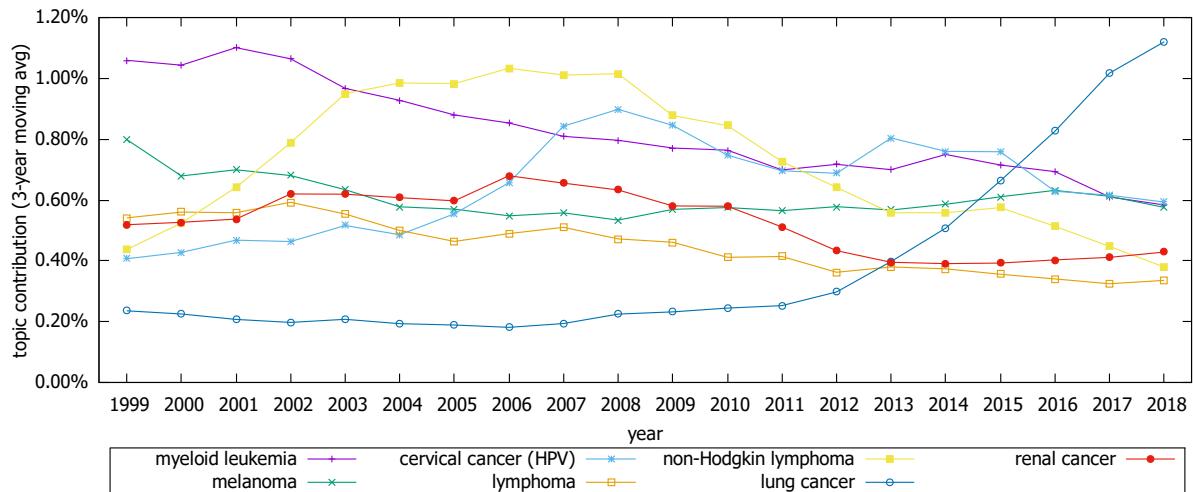
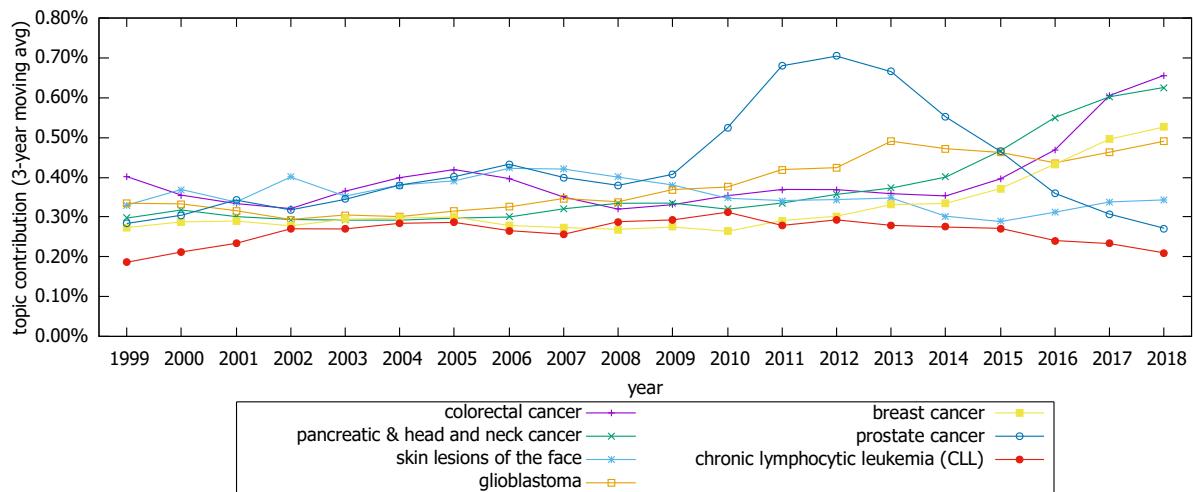


## Supplementary materials

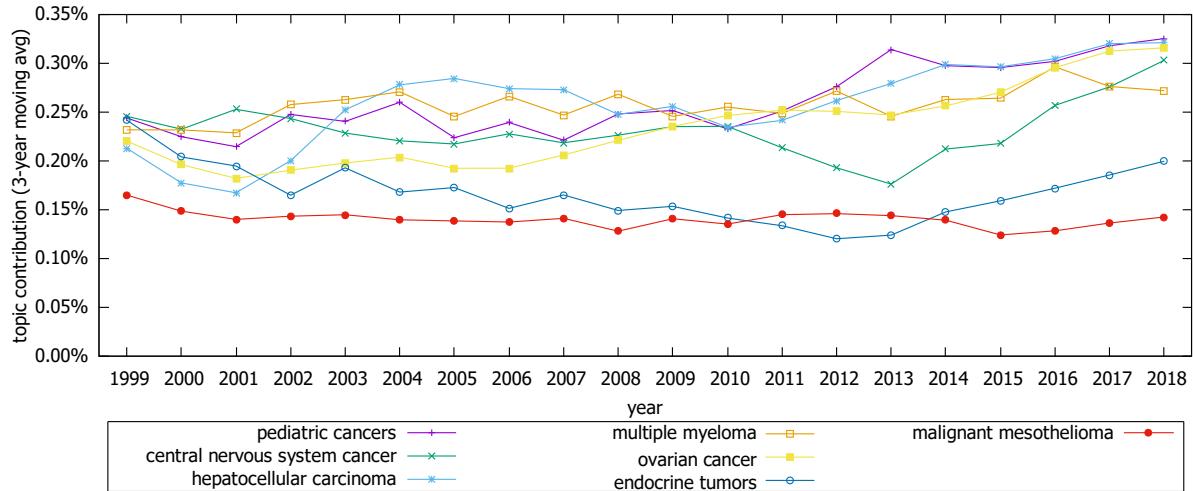
**Supp. Fig. 1** Trends of topics related to targeted immunotherapy category.



(a) Highest popular topics.

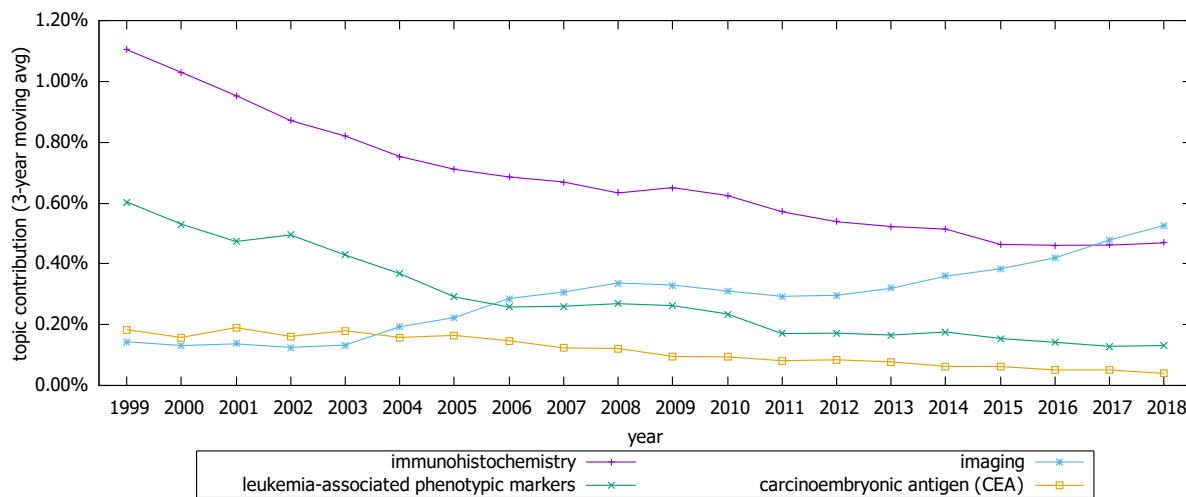


(b) Medium popular topics.

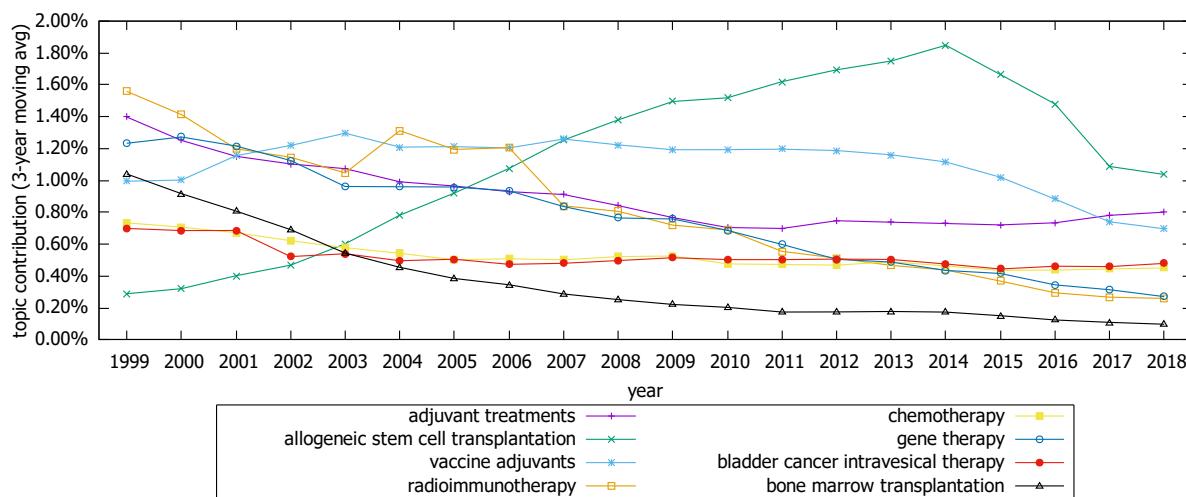


(c) Lowest popular topics.

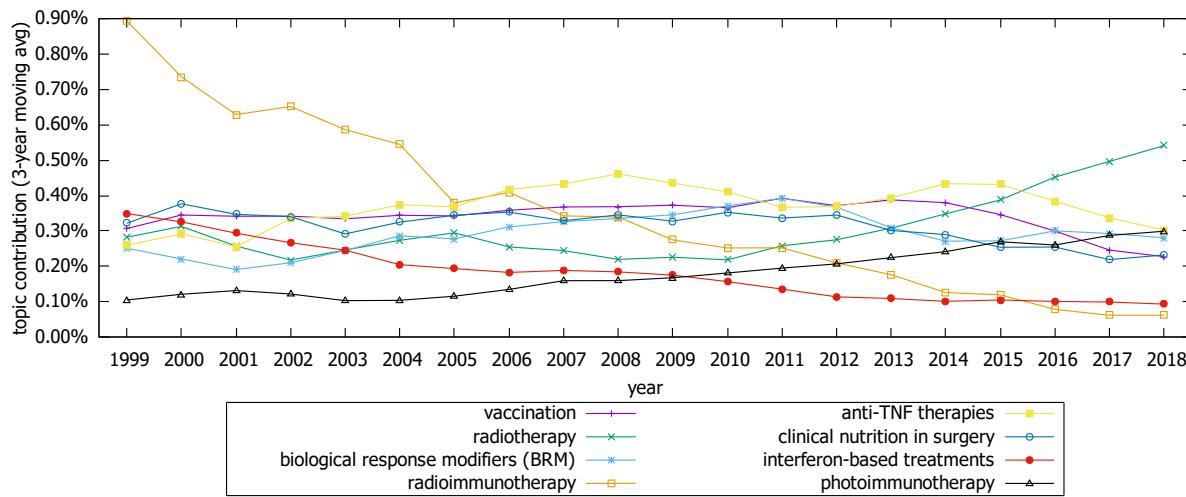
Supp. Fig. 2 Trends of topics related to cancer type category.



Supp. Fig. 3 Trends of topics related to diagnosis category.

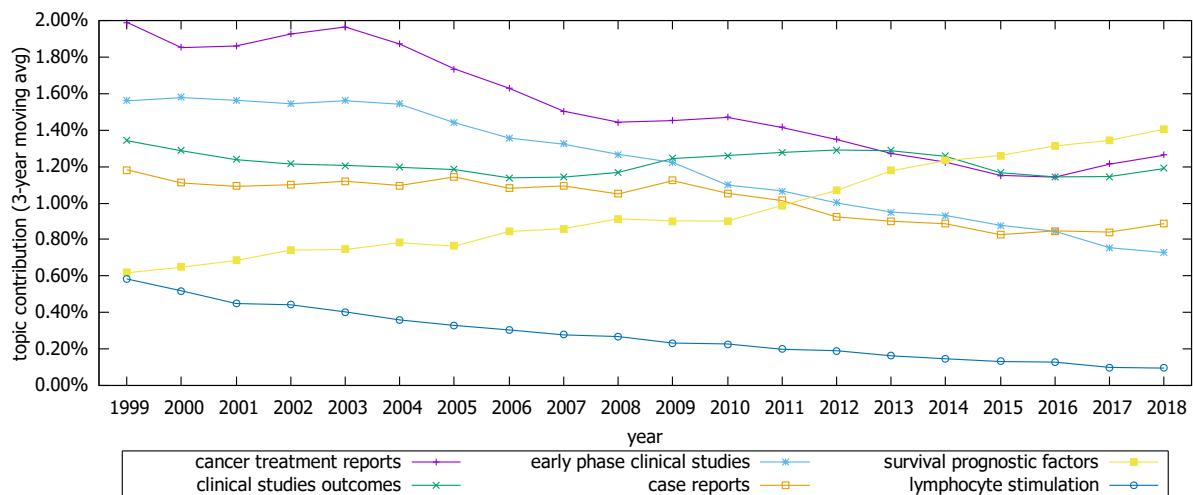


(a) Highest popular topics.

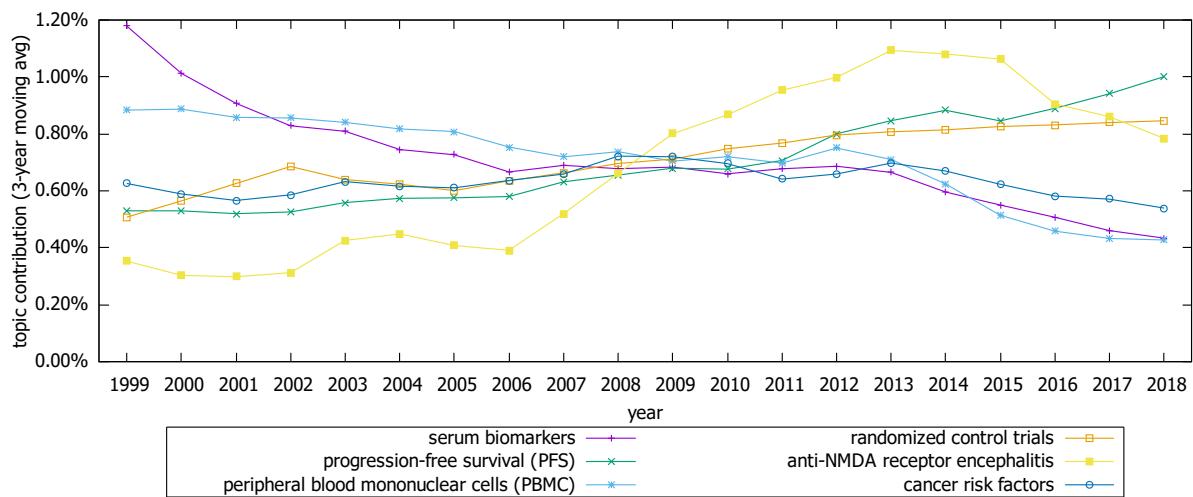


(b) Lowest popular topics.

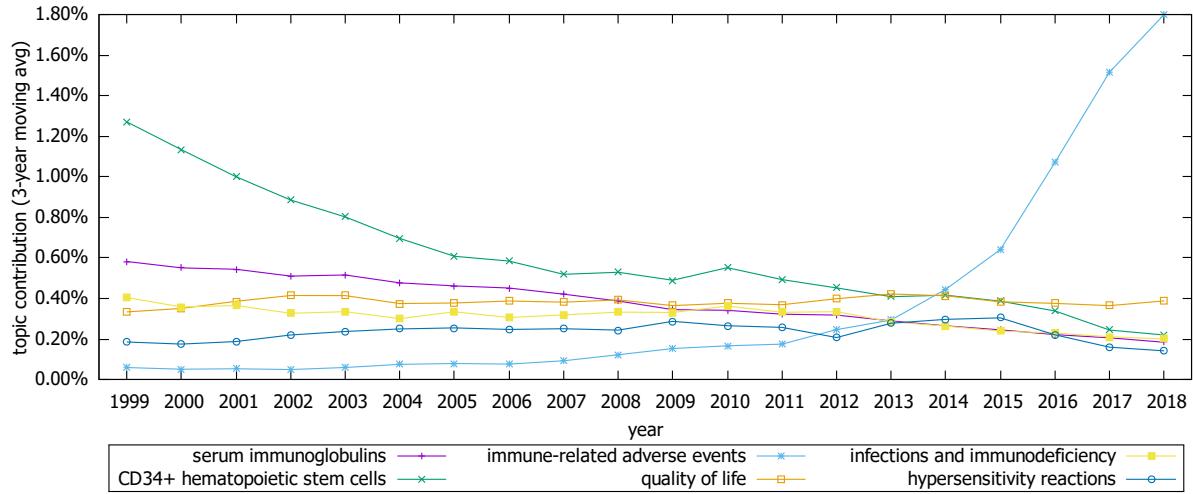
Supp. Fig. 4 Trends of topics related to cancer therapies category.



(a) Highest popular topics.

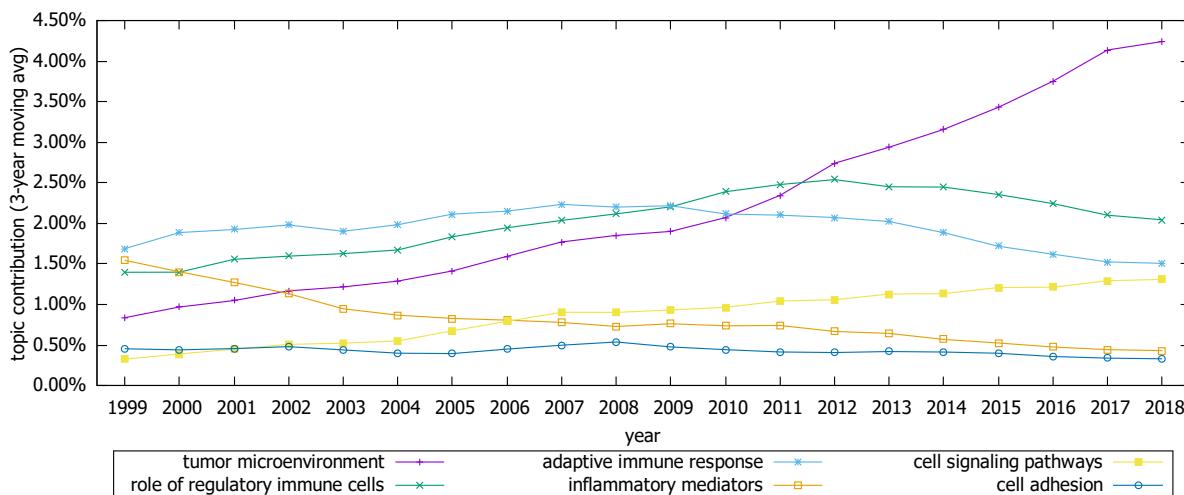


(b) Medium popular topics.

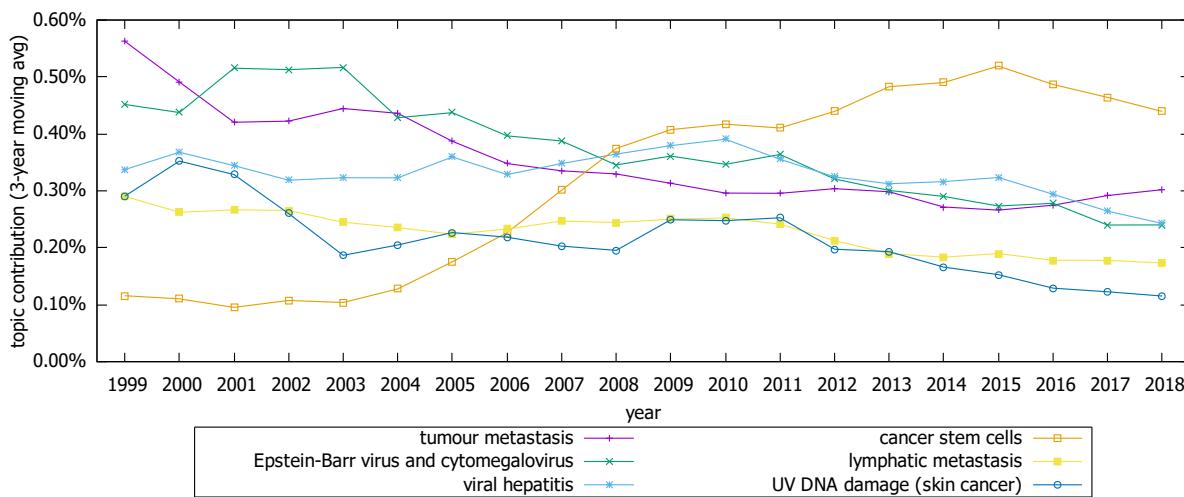


(c) Lowest popular topics.

Supp. Fig. 5 Trends of topics related to clinical research category.

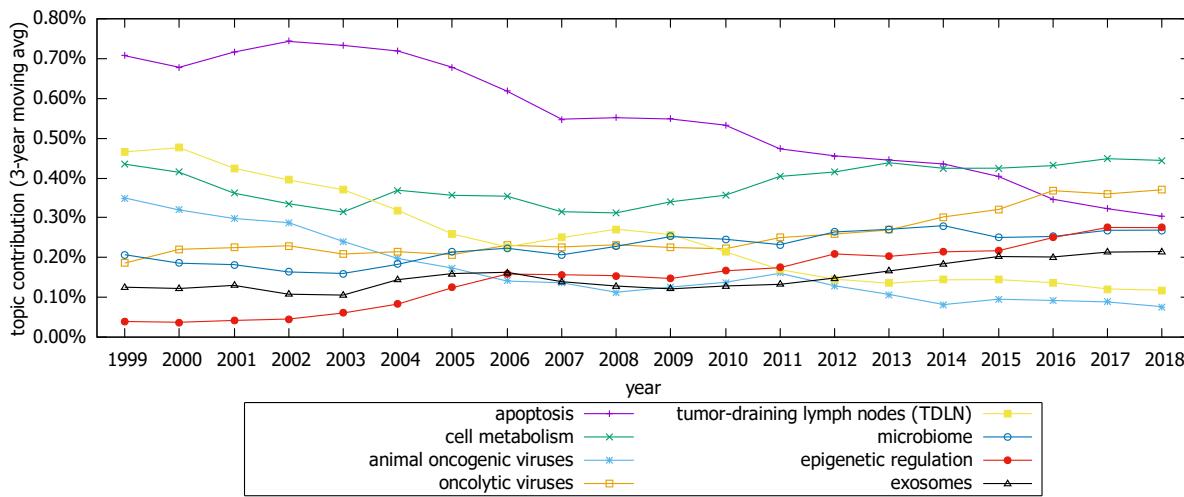


(a) Highest popular topics.

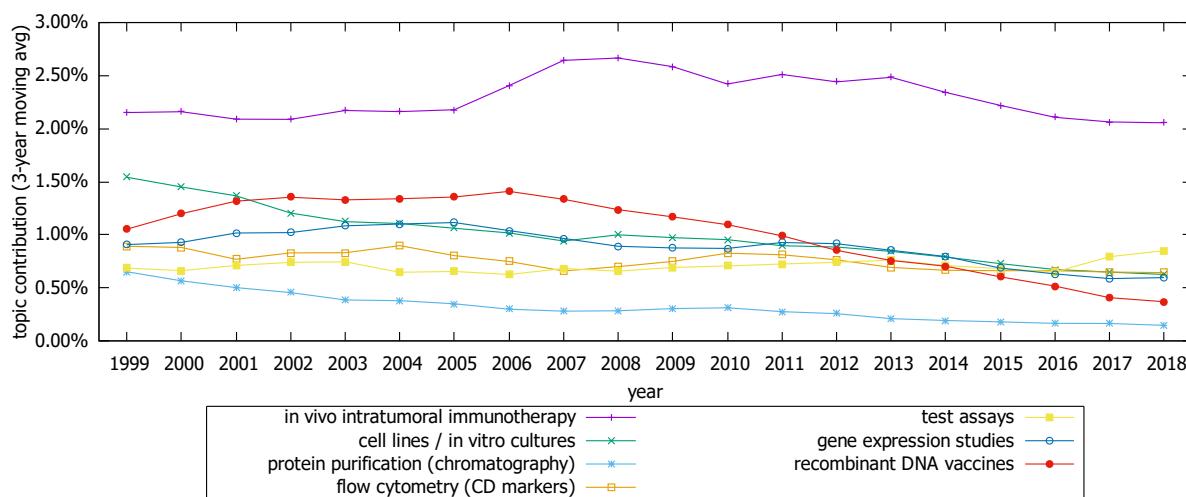


(b) Lowest popular topics.

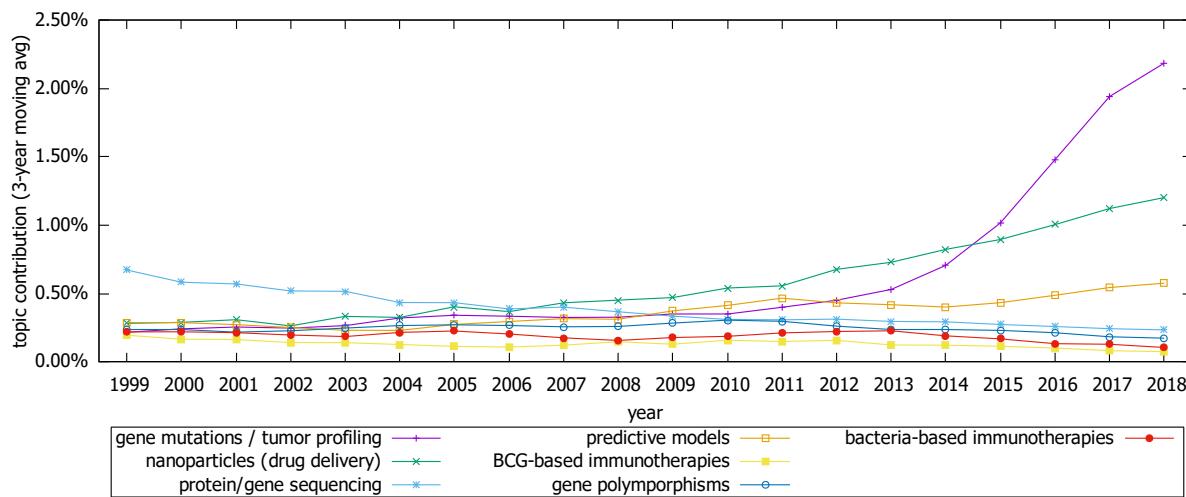
Supp. Fig. 6 Trends of topics related to mechanisms of carcinogenesis category.



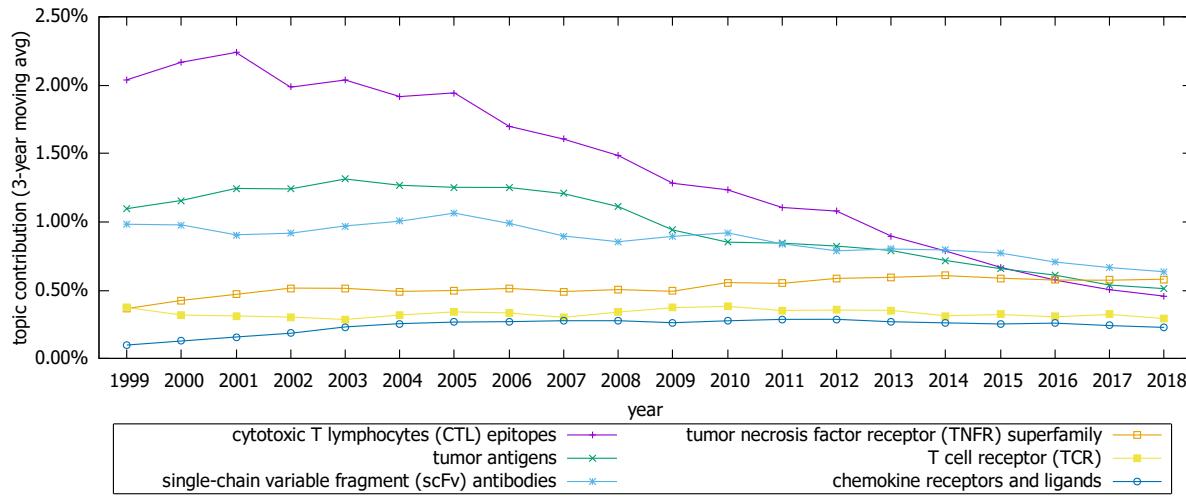
Supp. Fig. 7 Trends of topics related to pathways and physiology in translational research category.

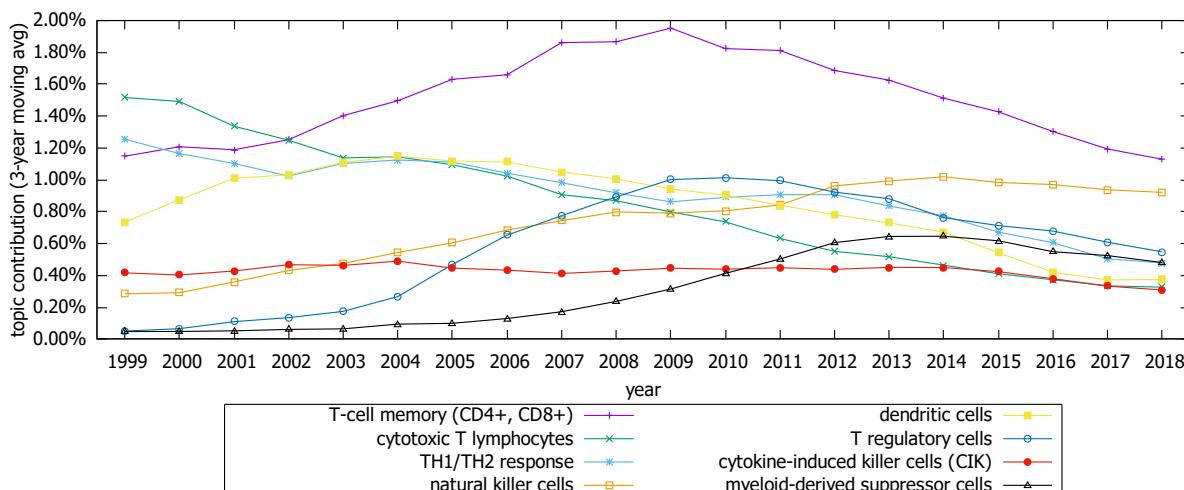


(a) Highest popular topics.

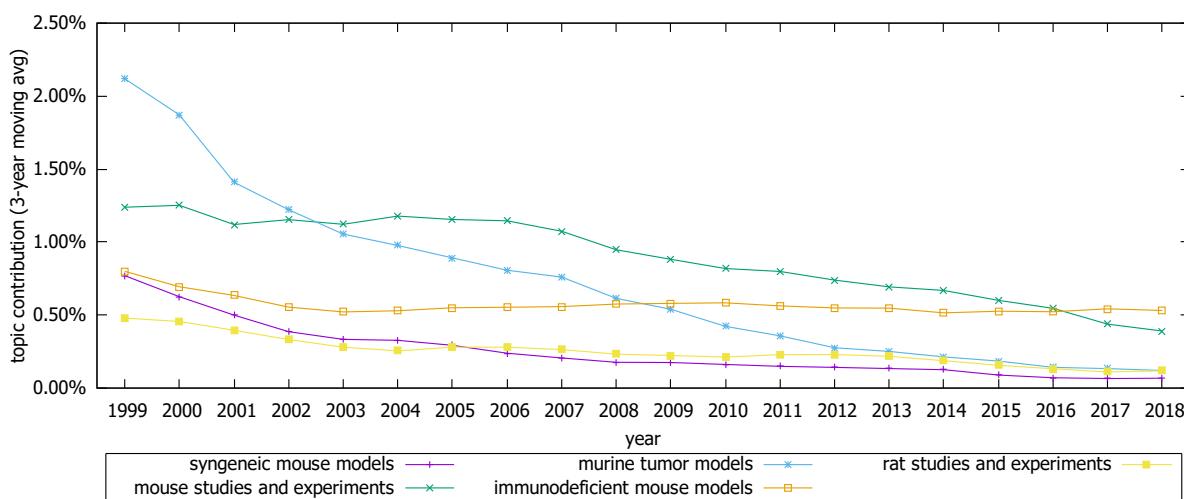


(b) Lowest popular topics.

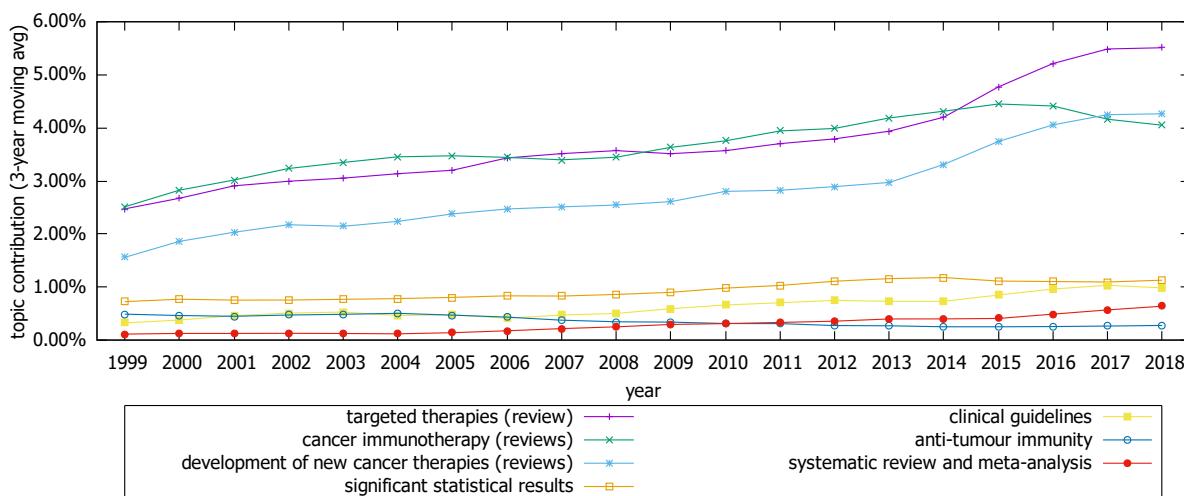
**Supp. Fig. 8** Trends of topics related to methodologies in translational research category.**Supp. Fig. 9** Trends of topics related to protein-based translational research category.



**Supp. Fig. 10** Trends of topics related to cell types in translational research category.



**Supp. Fig. 11** Trends of topics related to animal models in translational research category.



**Supp. Fig. 12** Trends of topics related to the general category.