Personalized Medicine: Trends in Clinical Studies Based on National Registry Data

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ABSTRACT

OBJECTIVE

To identify trends in personalized medical interventions directed at specific molecular/protein biomarkers and to assess the rate at which personalized medicine-related trials have been conducted in the United States.

METHODS

Personalized medicine (PM) is the use of a patient’s genomic or other molecular diagnostic (pharmacogenomic) data to guide treatment decisions. We identified all PM-related Phase III or IV trials initiated on or before January 7, 2009, based on the availability of our search strategy using a known set of studies for which PM-related trials have been conducted.

RESULTS

The mix of funding sources for PM trials has grown more diverse, with the share from industry declining. In the United States, more biomedical funding has been channeled into PM trials, particularly for oncology and hematology up until 1999. From 2002 to 2008, however, there was a notable increase in the number of PM trials for cardiovascular and neurological/behavioral conditions. Research into personalized medicine will continue to gain importance to payers, particularly in areas with high-cost specialty therapeutics, and also as the cost for genetic testing and other sophisticated diagnostic methods continues to fall.

CONCLUSIONS

Targeting drugs to smaller subgroups is assumed to result in treating those patients most likely to respond and least likely to experience an adverse event. These data are consistent with the technological driver of PM.

REFERENCES