Table 2: Global evidence of lagging innovation in the drug development process

Nation	Examples
Canada	Among 564 drugs evaluated by the Canadian Patented Medicine Prices Review Board between 2010 and 2016, only 37 (6.6%) were substantial improvements or breakthroughs.[12]
	Among "first-in-class" drugs approved by Health Canada between 1997 and 2012, only 16.3% represented therapeutic innovations. Among not "first-in-class" drugs, only 4.6% were therapeutic innovations.[13]
US	Among new molecular entities approved by the FDA between 1987 and 2011, only about one third were "first-in-class," while slightly less than half were addition-to-class "me too" drugs.[14]
	Among new cancer drugs approved between 2009 and 2013 by the FDA, a majority were "next-in-class." Prices for these drugs averaged over $100,000 per year, with no association between price and drug efficacy or innovativeness.[15]
	Among new cancer drugs approved between April 2014 and February 2016, only 19% met the modest goals for improving overall survival proposed by the American Society of Clinical Oncology Cancer Research Committee.[16]
	Among cancer drugs approved by the FDA between 2008 and 2012, about two-thirds received marketing approval based on surrogate outcomes, and half of these were demonstrated to have no benefit on survival in later studies.[17]
	Among the cancer drugs found by Kim and Prasad to lack survival benefits,[17] almost none had evidence for a benefit in quality of life when compared to placebo, observational groups, or other agents.[18]
Australia	A minority of drugs approved by the Australian Drug Evaluation Committee between 2005 and 2007 were found to be therapeutically innovative.[19]
Europe	Among new drugs on the British National Formulary from 2001 to 2012, approximately one quarter were considered "highly innovative."[20]
	The European Medicine Agency (EMA) granted approval to 48 cancer medications for 68 indications over a four year period ending in 2013; after a median follow-up of more than 5 years, only 35/68 (51%) of these approvals were found to either prolong survival or improve patients' quality of life.[21]
	Among 61 new "biotech" products approved by the EMA from 1995 to 2003, approximately one quarter were deemed a "therapeutic innovation."[22]
	Among therapeutic drugs approved by the EMA between 1995 and 2004, 28% were found to be "important therapeutic innovations."[23]