PERSONALIZED MEDICINE
BY THE NUMBERS

Prominent examples of personalized medicine drugs, treatments and diagnostics products available

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>113</td>
<td></td>
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</tbody>
</table>

- **30%** of all treatments in late clinical development rely on biomarker data
- **50%** of all treatments in early clinical development rely on biomarker data
- **60%** of all treatments in preclinical development rely on biomarker data

- **34% reduction in chemotherapy use would occur** if women with breast cancer receive a genetic test of their tumor prior to treatment
- **17,000 strokes could be prevented each year** if a genetic test is used to properly dose the blood thinner warfarin
- **$604,000,000 in annual health care cost savings would be realized** if patients with metastatic colorectal cancer receive a genetic test for the KRAS gene prior to treatment

Cost of sequencing a human genome

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>$300,000,000</td>
<td>$1,000</td>
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U.S. physicians using electronic records

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>29% using an electronic health system</td>
<td>93% reported actively using electronic medical records</td>
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- **137** FDA-approved drugs have pharmacogenomic information in their labeling
- **155** pharmacogenomic biomarkers are included on FDA-approved drug label

Members of the Personalized Medicine Coalition

<table>
<thead>
<tr>
<th>Year</th>
<th>2004</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>230</td>
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</table>

- **30%** of all biopharmaceutical companies surveyed require all compounds in development to have a biomarker
- **50%** of all clinical trials collect DNA from patients to aid in biomarker development
- **75% increase** in personalized medicine investment by industry from 2006-2011
REFERENCES


5 U.S. Food and Drug Administration. Table of Pharmacogenomic Biomarkers in Drug Labels. FDA web site. (Available at http://www.fda.gov/drugs/scienceresearch/researchareas/pharmacogenetics/ucm083378.htm).


11 Personalized Medicine Coalition. PMC Membership. PMC web site. (Available at: http://www.personalizedmedicinecoalition.org/).