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FAST FACT AND CONCEPT #99

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**Background** Key data in the decision process regarding chemotherapy include the response rate, median duration of response, and median survival, along with toxicity and quality of life information (see Fast Fact #14). The table below synthesizes data for several common cancers. The data were derived by reviewing standard oncology textbooks, along with a Medline search of recent relevant articles.

#### Comments on the Response and Survival Data

- All data are for patients receiving chemotherapy for metastatic or locally advanced cancer (not receiving adjuvant or neoadjuvant chemotherapy).
- All data is for first-line, commercially available oral or IV chemotherapy or biological therapy (such as monoclonal antibodies).
- 'Response Rate' is defined as the percentage of complete and partial responders in a given trial, where 'Partial Response' = > 50% reduction in measurable tumor for one month.
- Response is typically determined after 2 cycles of treatment (usually one cycle every 21-28 days); however, patients who progress after 1 cycle will generally continue progressing after two.
- The data reflect mid-point ranges derived from the available clinical trials; most of the data represent combination chemotherapy trials. Note: for certain cancers, the benefit of combination vs. single agent therapy is not proven (e.g. pancreas, biliary, liver).
- This information is not representative of all cancer patients. The data represent the 'best case' outcome, from a population of patients who were in good enough health to participate in a clinical trial (e.g. ambulatory, good functional status). Actual responses and response durations for a non-clinical trial population will likely be poorer.
- Data for biliary, pancreas, esophagus and liver come from many small trials (< 50 patients), thus the upper end figures are likely to be overestimated.
- Second-line chemotherapy, following disease progression from first-line treatment, can be expected to have a lower response rate and shorter duration of response.
- Median survival data includes both responders and non-responders; patients who respond to chemotherapy typically live longer than those who do not.

	Response Rate	Median Duration of Response	Median Survival
<b>Breast</b>	25-55%	6-12 months	24-36 months
<b>Colon</b>	25-35%	6-8 months	12-18 months
<b>Esophagus</b>	30-50%	4-6 months	6-9 months
<b>Lung (Non-Small Cell)</b>	20-30%	4-6 months	6-9 months
<b>Stomach</b>	20-50%	4-6 months	6-12 months
<b>Melanoma</b>	15-25%	4-6 months	6-9 months
<b>Pancreas</b>	10-25%	3-5 months	6-9 months

<b>Liver (Hepatocellular)</b>	5-15%	2-4 months	6-9 months
<b>Biliary (Cholangio)</b>	15-25%	2-4 months	6-9 months

## References

1. DeVita VT, et al, eds. Cancer: Principles and Practice of Oncology. 7th Edition. Philadelphia, PA: Lippincott Williams & Wilkins; 2005.
2. Kufe DW, et al, eds. Holland-Frei Cancer Medicine. 7th Edition. Hamilton, Ontario: BC Decker; 2006.

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