

Unit 6: Statistics



Final Review Assignment

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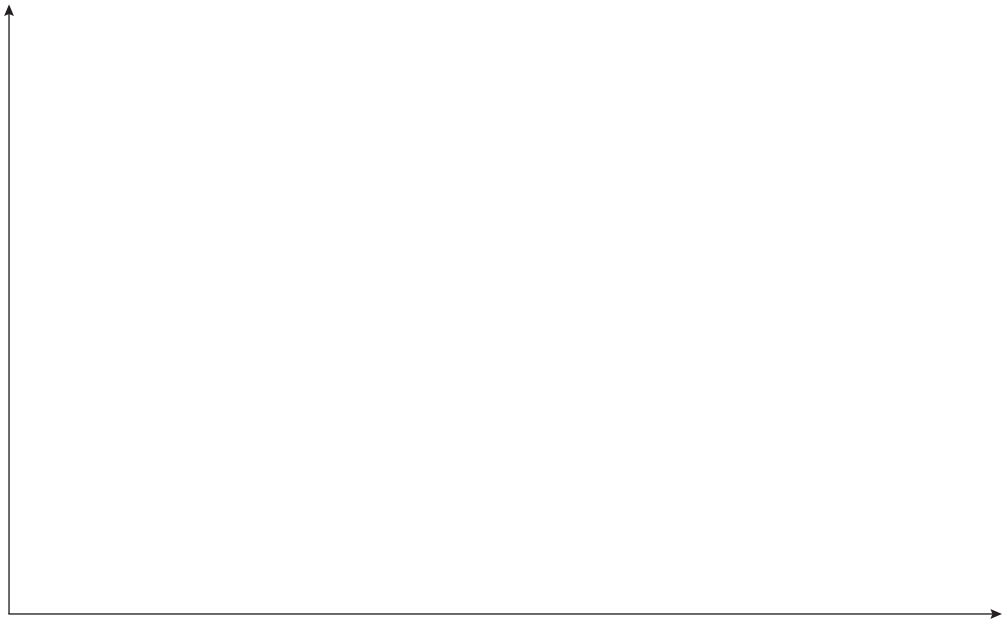
1. U2 is an Irish band that has been popular for over three decades. The lengths of 80 of their songs were selected at random and are listed in the table below.

Lengths of Randomly Selected U2 Songs (seconds)									
382	222	214	338	310	559	334	225	177	189
278	300	295	254	331	194	225	294	245	292
262	219	384	336	312	281	308	285	227	258
331	418	195	338	255	225	43	331	179	230
215	252	272	228	281	274	229	178	173	319
267	280	66	186	341	204	253	317	303	337
308	240	252	349	347	94	144	187	272	208
279	276	264	270	286	205	350	444	294	260

- a. Use 50-second intervals to make a frequency distribution table for the data.

Song Length(s)	Frequency

b. Use your frequency distribution table to draw a histogram for the data.



c. Determine the mean, median, mode, range, and standard deviation for the song lengths.

mean (s)	
median (s)	
mode (s)	
range (s)	
standard deviation (s)	

d. Describe whether the data appears to be relatively normally distributed.

- e. Assume the data is normally distributed and that the band's entire collection of songs has a mean and standard deviation equal to those calculated above. What percentage of U2 songs are expected to be
 - i. over 180 seconds
 - ii. between 210 seconds and 300 seconds
- f. Under what length of time are 90% of all U2 songs expected to be?

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2. Read Cancer Consciousness on the following pages. In one or two paragraphs, summarize the claims of the report. Be sure your summary includes the following:

- The purpose of the report
- Important findings of the report
- How margin of error, confidence intervals, confidence level, and sample size can be interpreted from the report
- An assessment of the credibility of the report

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Cancer Consciousness

Measuring Canadians' Knowledge of Cancer & Their Willingness to Donate

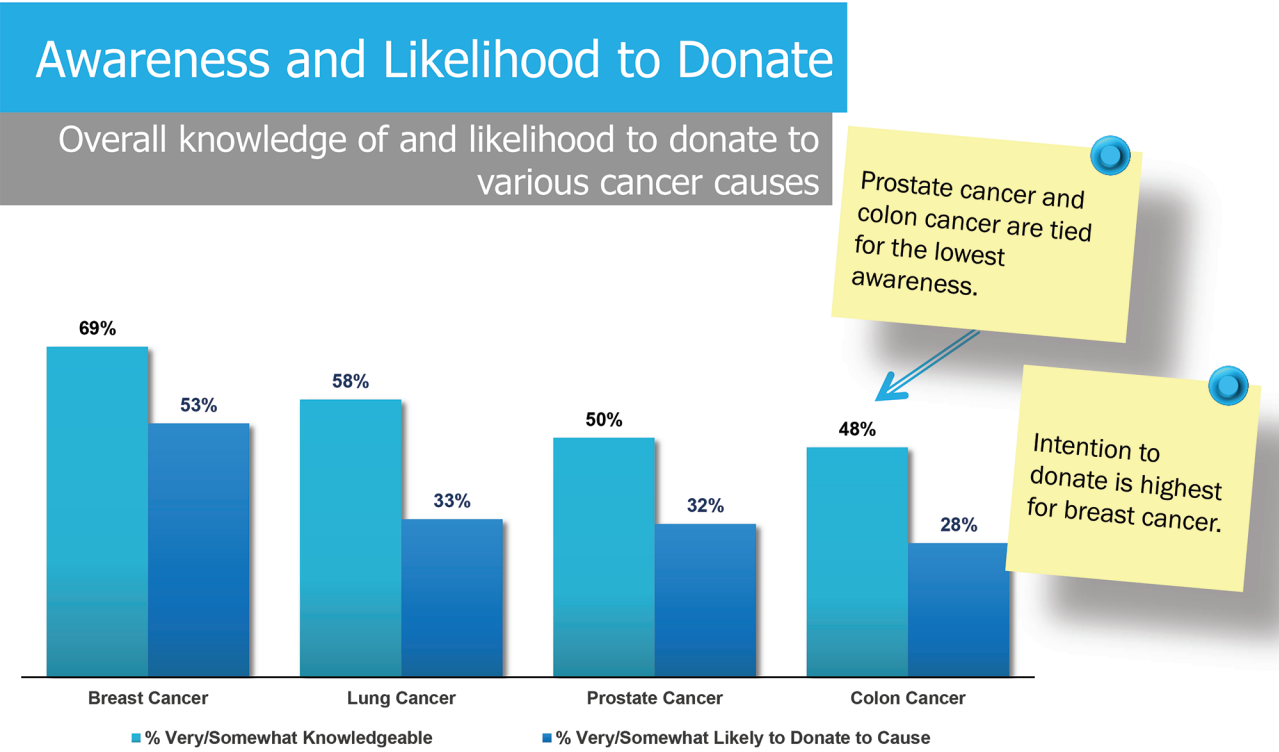
Of these Canadians, 62% are at least somewhat likely to donate to a cause.

Over 1,500 Canadians were surveyed about their knowledge of four major types of cancer, then were asked about their intentions to donate to these causes.

79%

of Canadians are at least somewhat knowledgeable about one of these cancers.

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MARKETING

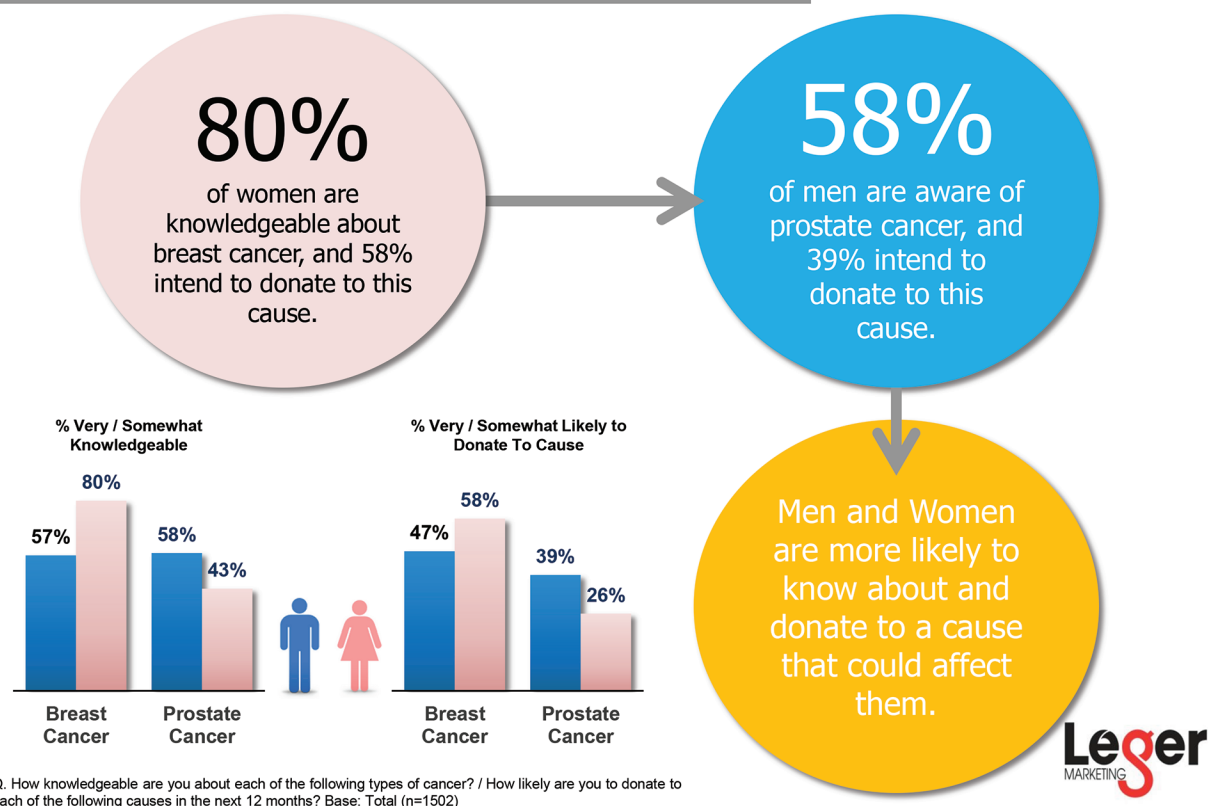


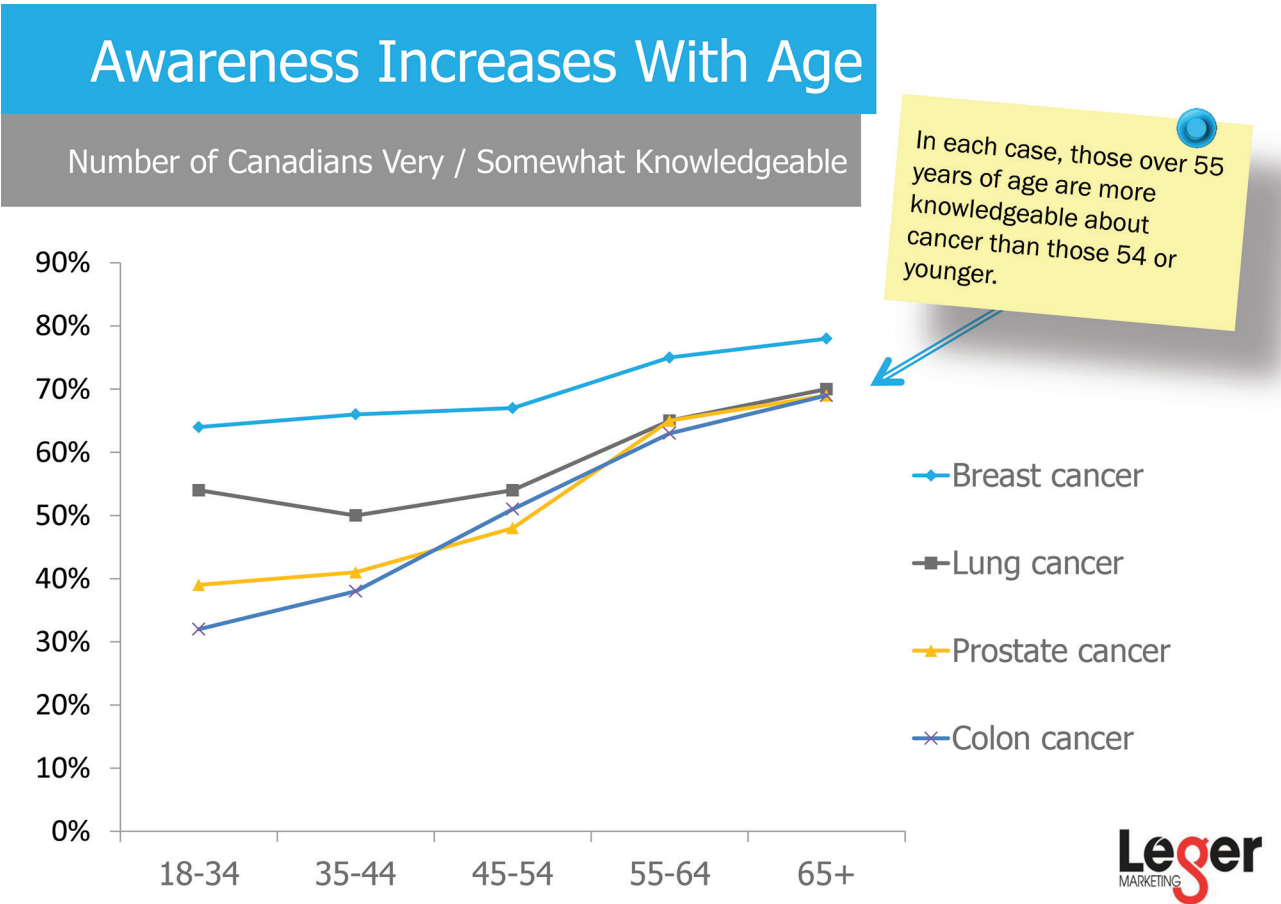
The majority of Canadians are aware of breast cancer and lung cancer, and the majority intend to donate to breast cancer.

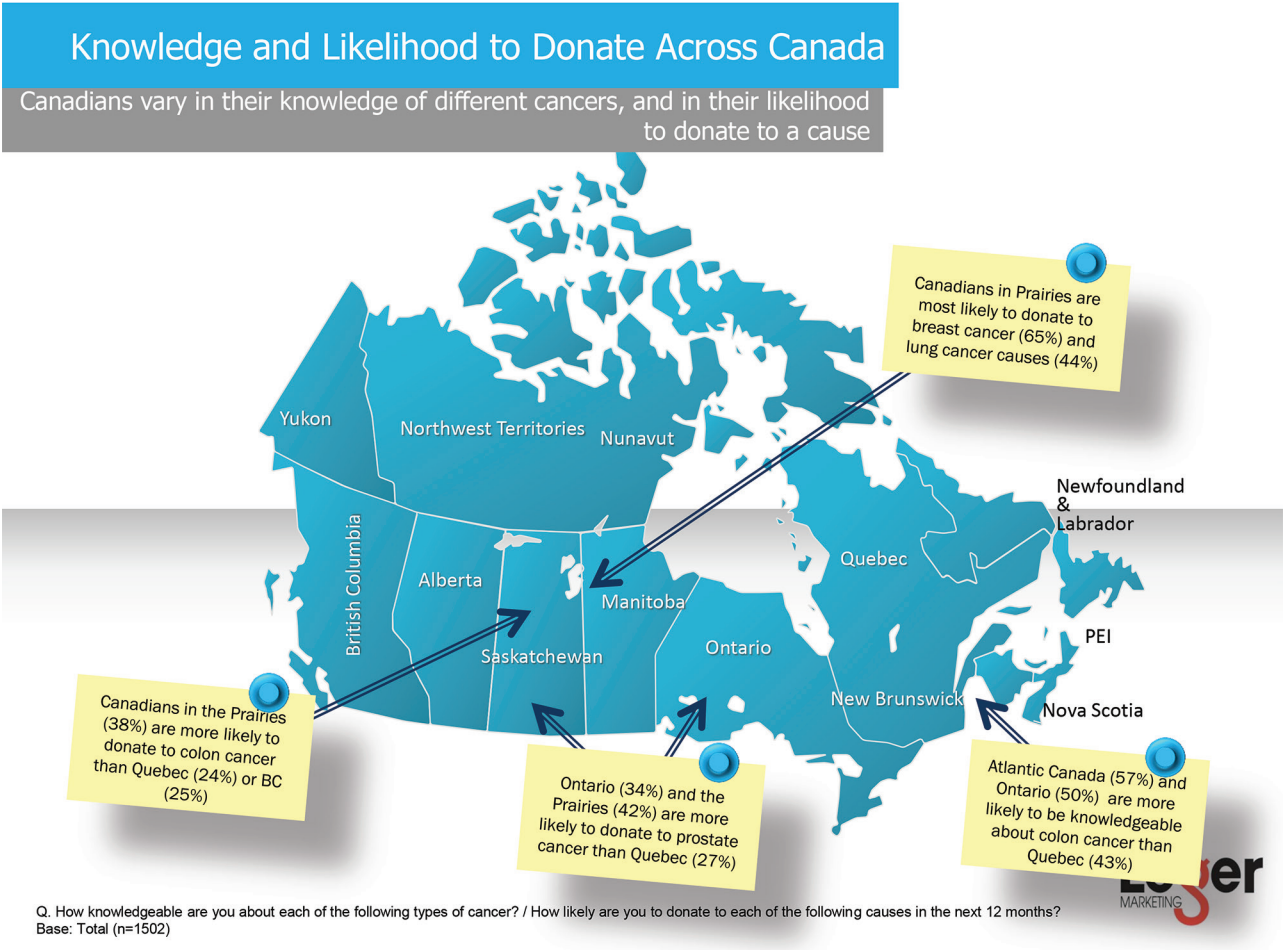
Q. How knowledgeable are you about each of the following types of cancer? / How likely are you to donate to each of the following causes in the next 12 months?
Base: Total (n=1502)



Men and women prioritize different cancer-related causes.







Research Methods

INSTRUMENT

The survey was completed online between October 24th and October 31st, 2012 with a sample of 1,502 Canadians. The margin of error for a representative sample of this size is considered accurate to within $\pm 2.53\%$, 19 times out of 20.

QUALITY CONTROL

Stringent quality assurance measures allow Leger to achieve the high-quality standards set by the company. As a result, our methods of data collection and storage outperform the norms set by WAPOR (The World Association for Public Opinion Research). These measures are applied at every stage of the project: from data collection to processing, through to analysis. Leger has also obtained "Gold Seal" certification from the Marketing Research and Intelligence Association (MRIA), the leading professional marketing association in Canada. This is obtained following an audit of the company's quality control and business procedures by Deloitte. Leger was certified in 2006 and was re-certified again this year. Leger also meets or exceeds the standards for marketing research created by ESOMAR, the international association of public opinion and market research professionals. Its code of ethical practice is reviewed frequently to ensure that representatives respect respondent privacy, regardless of the techniques or technologies used to conduct the research. We aim to answer our clients' needs with honesty, total confidentiality, and integrity.

(Please note: Percentages reported may not always total 100% due to rounding)

