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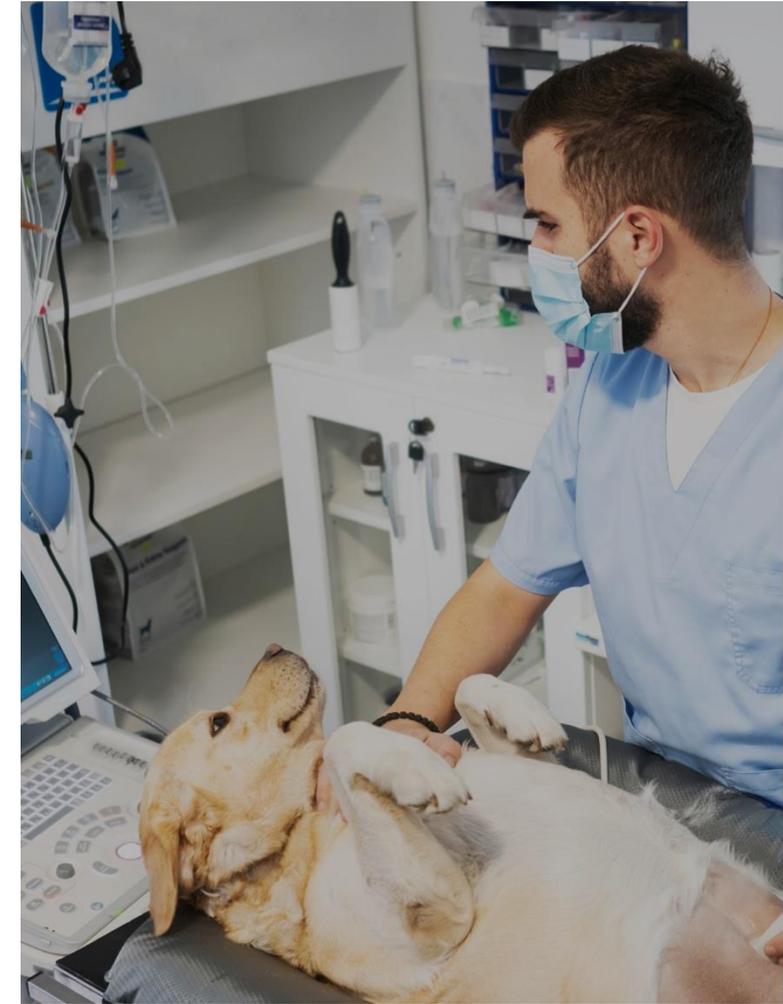


Canine Cancer: *Take C.H.A.R.G.E.*
Gallup Dog Owner Survey and
Canine Cancer Care Index

MAY 23, 2022

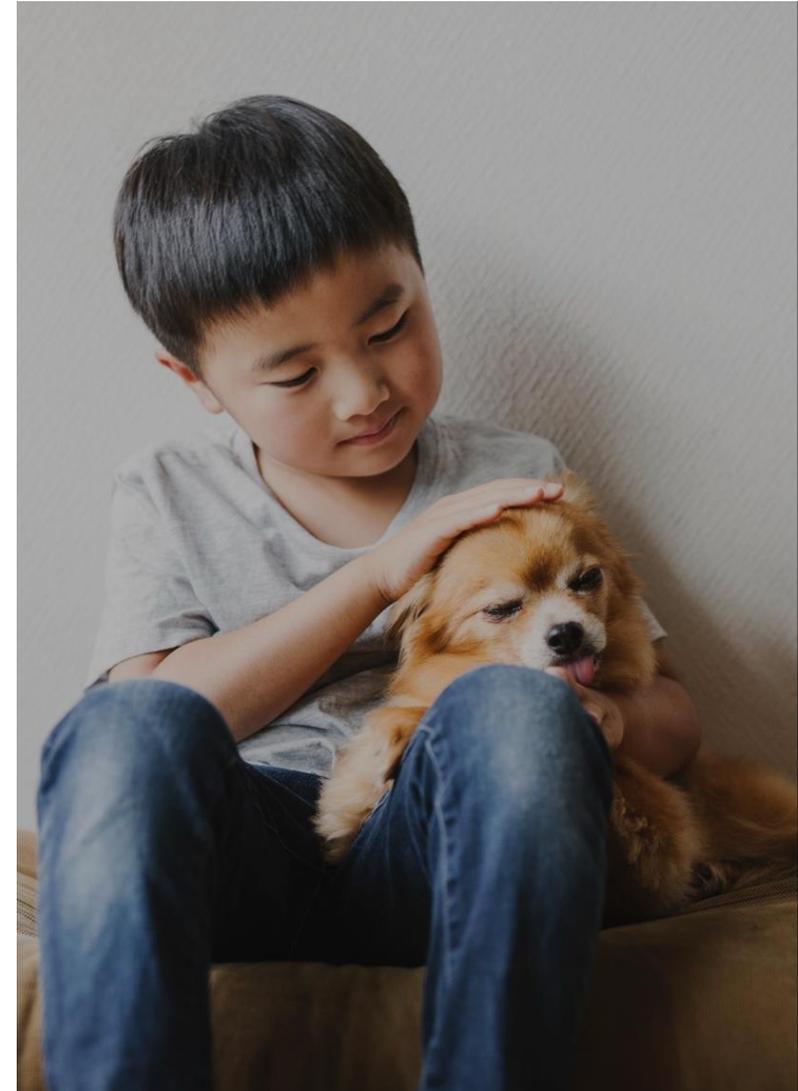
Key Findings and Conclusions

- **Gallup developed the Canine Cancer Care Index** using the responses from dog parents in the Gallup Panel who have experienced caring for a dog with canine cancer.
- The Canine Cancer Care Index is designed to measure dog parents' experiences with cancer diagnoses in their pet on **three important dimensions -- Knowledge, Quality Care and Canine Comfort -- and track these over time.**
 - The baseline for the Canine Cancer Care Index is 80.5 on a scale ranging from 0 to 100. High scores on the index mean dog parents are having positive experiences on all index dimensions.
- **Much remains to be done** to ensure dog parents and their dogs have an optimum care experience when going through canine cancer.
 - Despite high proportions of dog parents “strongly agreeing” that their dog received high-quality care, people are less likely to report feeling satisfied with the information received (knowledge) and the overall comfort of their dog. These are critical areas of opportunity.
 - Three-quarters of dog parents were satisfied or very satisfied with their treatment experience, but one in four were dissatisfied or very dissatisfied.
- The results of this study show preliminary evidence that **cancer prevalence among dogs in 2021 was 3.4%**, while reported incidence in 2021 was 2.8%.
- More than 8 in 10 dog owners reported favoring the creation of a U.S. canine cancer registry maintained by veterinary clinics to better understand the disease and advance treatments.



Key Findings and Conclusions

- For dog parents, deciding whether to treat their dog's cancer can be complex. **Only about a third of dog parents decide to move forward with treatment.**
 - The top barriers to treatment were low likelihood of the cancer treatment success, dog's age, high cost of cancer treatment, and discomfort the dog would experience due to side effects from cancer treatment.
 - Even dog parents who decided to treat their dogs had some of these same concerns.
- Dealing with canine cancer has a major impact on people's wellbeing. **People's ability to manage their dog's side effects** from cancer treatment is the **best predictor of key wellbeing outcomes.**
 - The less informed and equipped dog parents are, the more likely they are to feel depressed. Being able to manage their dog's side effects is critical to improving dog parents' overall experience.
 - Canine cancer is a major stressor for dog parents: Nearly one-third of respondents (29%) reported having their quality of life impacted heavily negatively due to their dog's cancer, while 63% reported feeling a lot of stress and 58% reported feeling down and depressed a lot during the experience.
- Veterinarians play a decisive role in people's experience with canine cancer: They diagnose and treat medical conditions and they advise pet parents about general care and treatments. Yet, there seems to be **a lack of standardization in what information is shared with dog parents.**
 - Many dog parents going through such an ordeal lack information about cancer treatment options, the treatment timeline and side effects of treatment, in addition to resources to support their own mental health.
 - A third of dog parents reported not receiving any information from their vet on key aspects of their dog's cancer.



Survey Methodology Summary

About the Survey

- conducted March 14-30, 2022, using the Gallup Panel
- 5,793 total respondents, including 3,897 dog parents (past or current)
- 67% of respondents have had at least one dog in the past 10 years
- 50% of respondents are current dog owners
- 17% of dog owners have had experience with canine cancer in the past 10 years
- 1% of dog owners are currently experiencing canine cancer
- 6% of dog owners who said they have had experience with canine cancer in the past 10 years are currently experiencing it
- the margin of error for the overall sample (adjusted for design effects) is +/- 1.5 - 2.5. The margin of error for subgroup comparisons is higher

About the Dogs in the Survey

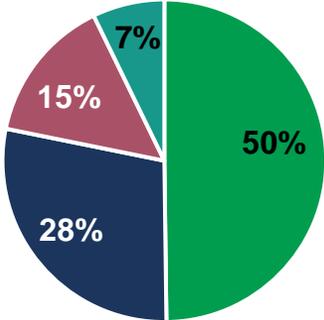
- 5,062 dogs owned by respondents in 2021
- 173 dogs had cancer in 2021 of which 142 received their diagnosis that year
- 49% female, 51% male
- 83% neutered or spayed
- 93% had access to a front yard or backyard
- 78% received a checkup at least once a year
- 9% of dog parents had pet insurance



Prevalence and Incidence of Canine Cancer in Sample

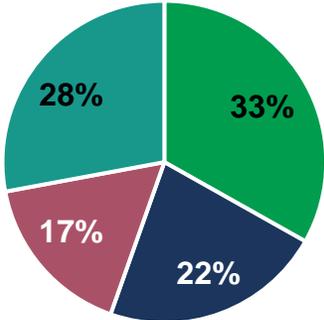
Number of Dogs Owned Currently

■ 0 ■ 1 ■ 2 ■ More than 2 dogs



Number of Dogs Owned In Past 10 Years

■ 0 ■ 1 ■ 2 ■ More than 2 dogs



*Breeds most represented in sample after mixed-breed dogs

Prevalence
3.4%
 (173/5062)

Incidence
2.8%
 (142/5062)

Prevalence is the 2021 prevalence of canine cancer in the United States, or the total percentage of dogs who experienced cancer that year. Similarly, **incidence** refers to the 2021 incidence of canine cancer in the United States, or the total percentage of dogs with a new onset of cancer in that year.

10 MOST REPRESENTED BREEDS IN OVERALL SAMPLE*

1	Labrador
2	Chihuahua
3	Pitbull
4	Golden Retriever
5	German Shepherd
6	Yorkshire
7	Dachshund
8	Boxer
9	Beagle
10	Shih Tzu

2 in 3 | dog parents strongly agree that their dog is an **important part of their lives** and is **treated like a family member.**

Dog parents who have experienced canine cancer tend to report higher levels of attachment to their dog than those who haven't been through the same ordeal. On average, those who have experienced dog cancer in a pet are 17 percentage points more likely than other dog owners to strongly agree with the statement "my dog is treated like a family member."

Understanding and Improving the Canine Cancer Care Experience

The seven items that make up the index were developed to represent key aspects of the canine cancer care experience across critical moments of the patient (and dog parent) journey. Each item is answered on a scale of 1 to 4, where 1 means strongly disagree and 4 means strongly agree. The responses are then scaled from 0 to 100 — the higher the score, the better the experience. The overall index represents experiences across three fundamental dimensions of the treatment experience: knowledge and awareness, quality of care, and the canine’s comfort. Respondents may have uniformly positive or negative experiences across all dimensions, or their experiences on some dimensions may be more positive than others.



Respondents were asked to answer these questions using a 4-point Likert scale (strongly disagree, disagree, agree, strongly agree). Item scores are the average scores across respondents, scaled from 0 to 100.

Only 18% of Dog Parents Gave an A+ to Their Overall Treatment Experience

Although canine cancer treatments have come a long way, much can be done to improve the experience of dog parents and their pets throughout cancer diagnosis and treatment, as shown by this year's baseline of 80.5 out of 100, which is equivalent to a B-.

Overall Index Score*
80.5 out of 100

Index results range from 32.1 to 100.

- 25th percentile: 74.3
- 50th percentile: 79.2
- 75th percentile: 96.2



The index score is calculated by taking the mean of the seven index items for each respondent and scaling it to a metric of 0 to 100. Lower scores represent poorer treatment experience overall, whereas higher scores represent better treatment experience overall.

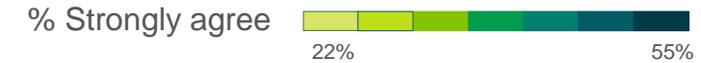
The items in the index were developed to be reachable goals: Everyone can and should be able to give a perfect 100 on the Canine Cancer Care Index. However, currently only 18% of dog parents who had a dog treated for canine cancer in the past 10 years scored 100/100. This leaves ample room for improvement in the canine cancer treatment experience.

**Only respondents who completed four of the seven index items were included in the overall index average.*

Driving Excellence on Each Item Is Key to Improving the Index Score

The best way to understand how to drive change on the overall care experience is to examine the degree to which respondents endorse each item, focusing on the percentage who gave the most favorable answer (“strongly agree”) to a question. These are the numbers to monitor to improve the overall index score. Ideally, everyone should be able to “strongly agree” with every item; this is the ultimate goal for improving care experiences.

Items with a lower percentage of “strongly agree” indicate greater areas of opportunity for improving care experiences. Overall, about half of dog parents strongly agree their dog’s quality of life and comfort are considered during treatment. However, more needs to be done to improve dog parents’ understanding of treatment. Less than one in three strongly agree they know what to expect. Finally, the management of the treatment’s side effects remains challenging for many dog parents.



INDEX DIMENSION	KEY EXPERIENCES	% STRONGLY AGREE
Knowledge	I know what to expect during my dog’s cancer treatment.	30%
	My veterinarian has explained treatment options thoroughly.	35%
	I have a clear understanding of potential side effects of treatments.	29%
Quality Care	My dog is receiving high quality care.	46%
	My veterinarian cares about my dog’s comfort during treatment.	47%
Canine Comfort	My dog’s quality of life is considered in making treatment decisions.	55%
	I have been able to manage my dog’s cancer treatment side effects well.	22%

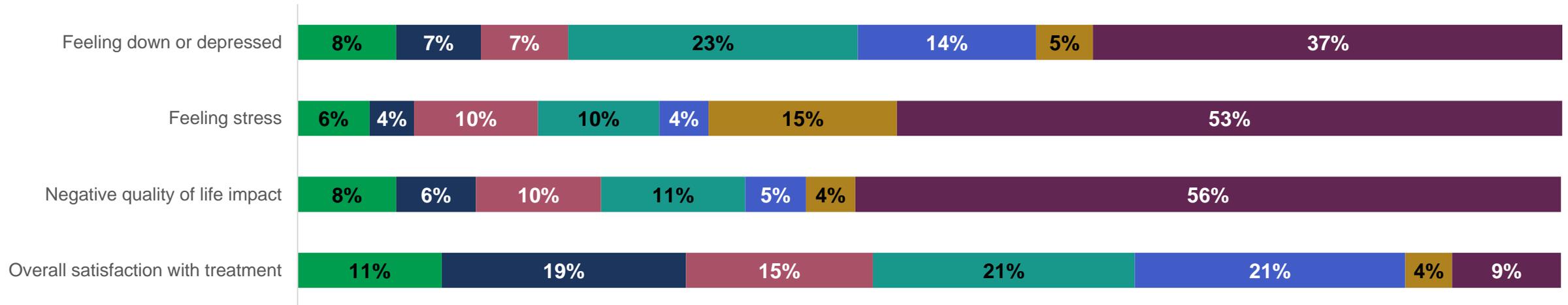
The Index Components as Drivers of Key Wellbeing Outcomes

Relative Importance analyses show how much each index item contributes to explaining key outcomes. This is another way to view key areas of opportunity for improving the care experience. Items that are most important (with the greatest percentages) are prime targets for intervention and improvement.

Having a veterinarian who cares about a dog's comfort, high quality of care, and thorough explanation of treatment options was most critical to overall treatment satisfaction, whereas management of side effects was the most important factor in determining the negative impact canine cancer has on dog parents' wellbeing.

Index Items:	Knowledge	Quality Care	Canine Comfort
	<ul style="list-style-type: none"> ■ Clear expectations ■ High quality care ■ Ability to manage cancer treatment side effects 	<ul style="list-style-type: none"> ■ Thorough explanation of treatment options ■ Cares about my dog's comfort 	<ul style="list-style-type: none"> ■ Clear understanding of potential side effects ■ Quality of life

Key Outcomes:

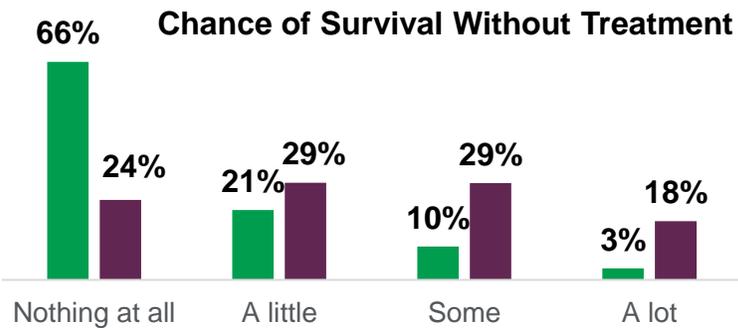
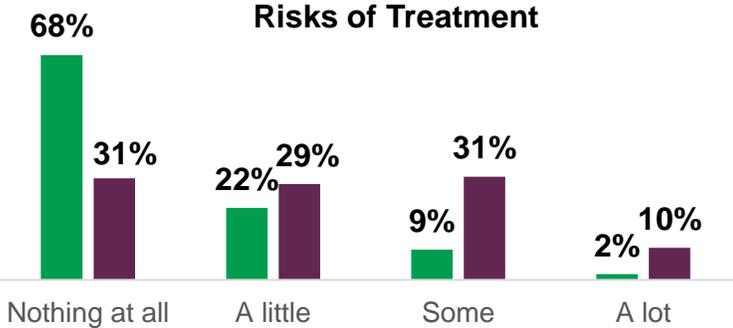
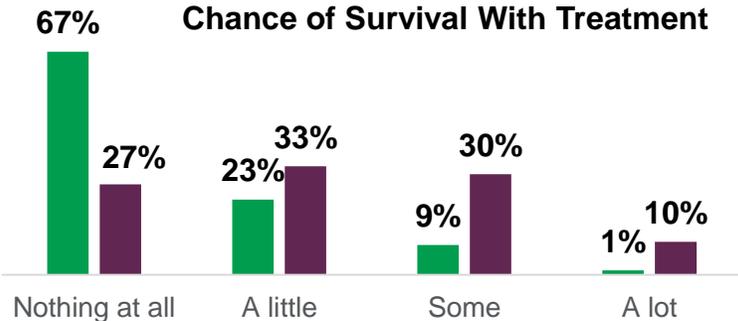
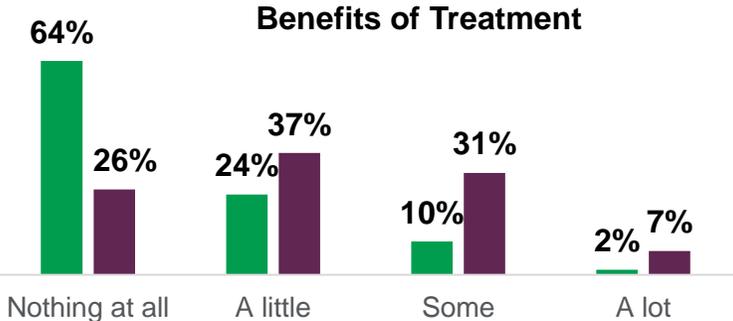


The bigger the percentage, the more important the corresponding item is to explaining the outcome.

Dog Parents Have Knowledge Gaps on Key Aspects of Cancer Treatment

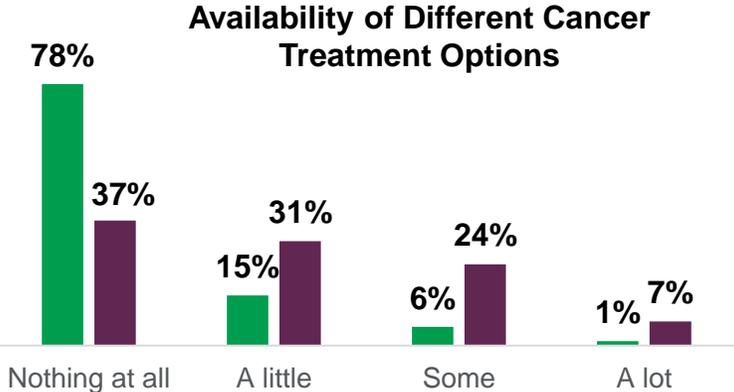
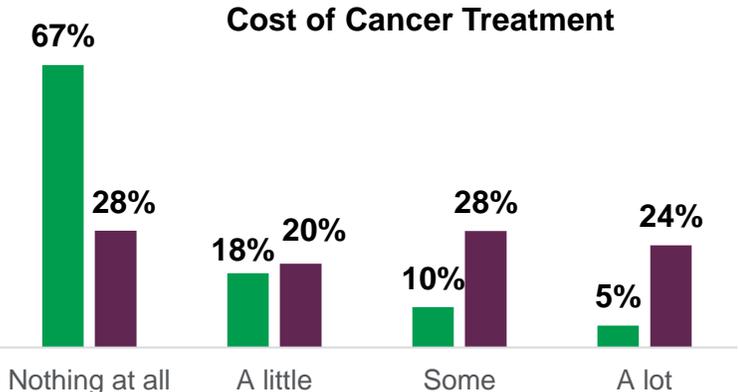
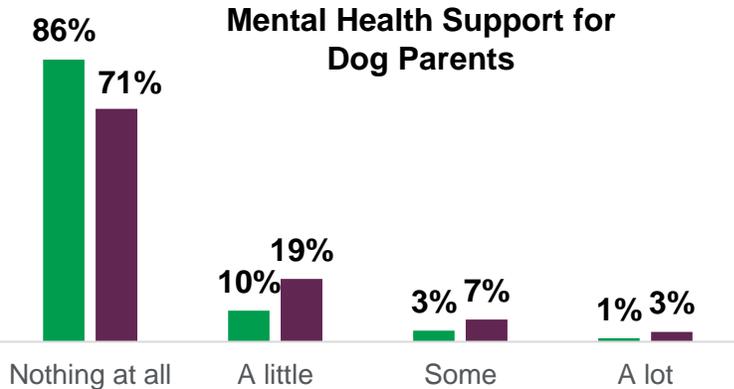
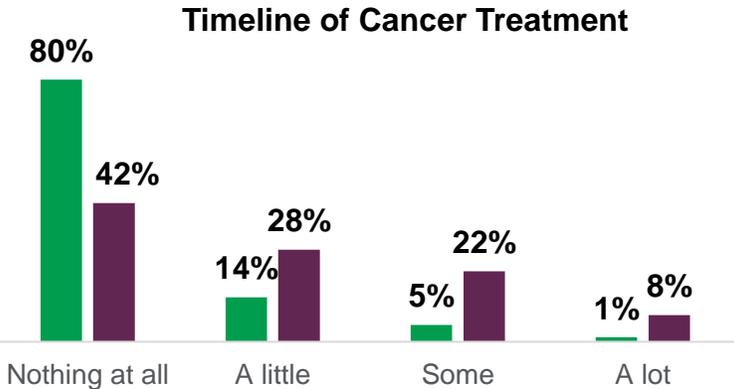
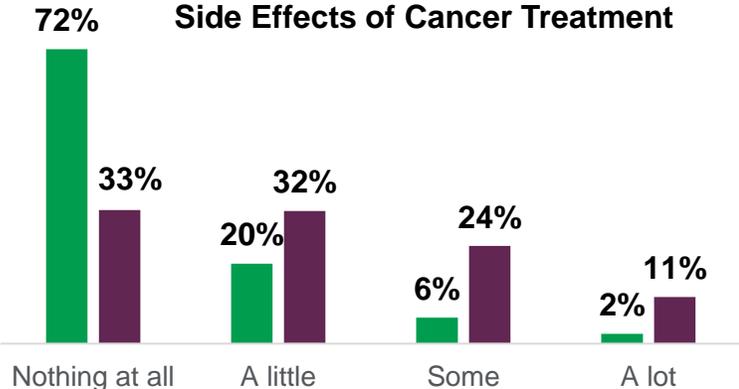
Dog parents who have experienced canine cancer generally have more knowledge of most aspects of the treatment experience than those who haven't. They report being especially knowledgeable about the cost of treatment, the benefits and risks of treatment, and the chance of survival without treatment. Little is known by dog parents about mental health support options, availability of cancer treatment options, general treatment timeline, and side effects of cancer treatment, even for those with previous canine cancer experience.

■ Knowledge of those with no canine cancer experience ■ Knowledge of those with canine cancer experience



Dog Parents Have Knowledge Gaps on Key Aspects of Cancer Treatment

■ Knowledge of those with no canine cancer experience ■ Knowledge of those with canine cancer experience



65%

of respondents whose dogs had cancer know little or nothing about the side effects of cancer treatment.

90%

of respondents whose dogs had cancer know little or nothing about mental health support options.

Dog Parents Not Fully Satisfied With Their Veterinarian’s Counsel

- On average, **1 in 3** dog parents whose pet has experienced cancer say they didn’t get any information from their veterinarian on critical aspects of their dog’s cancer.
- **6 in 10** dog parents who’ve had experience with canine cancer are satisfied or very satisfied with the level of information provided by their veterinarian on the benefits and risks of cancer treatment and the chance of their pet’s survival with and without treatment.
- Only **4 in 10** dog parents with cancer experience are satisfied or very satisfied with the information they received about the cost of treatment. Nearly 3 in 10 are dissatisfied or very dissatisfied with the information they received about the cost of treatment.
- **68%** of dog parents with cancer experience say they didn’t receive any information from their veterinarian about mental health support.
- Almost **1 in 2** dog parents with cancer experience are satisfied or very satisfied with the information they received about the side effects of cancer treatment.

NO.	SATISFACTION WITH INFORMATION TYPE	%*
1	Benefits of cancer treatment	63%
2	Your dog’s chance for survival without cancer treatment	62%
3	Your dog’s chance for survival with cancer treatment	60%
4	Risks of cancer treatment	59%
5	Side effects of cancer treatments	47%
6	Timeline of cancer treatment	46%
7	Availability of different cancer treatment options	44%
8	Cost of cancer treatment	40%
9	Mental health support for dog parents	21%

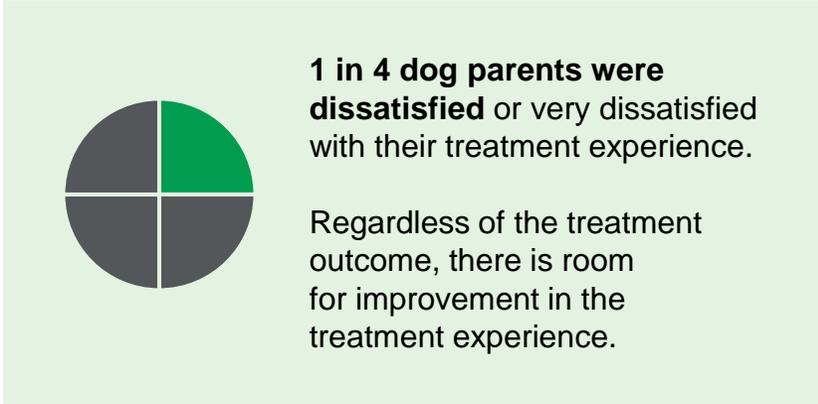
*Respondents who answered “satisfied” or “very satisfied” when asked about their satisfaction with the information provided by their veterinarian

One in Three Parents of Dogs With Cancer Opted for Treatment

Most dog parents report that, before a cancer diagnosis, their dog was lethargic and seemed more tired than normal. Of all pet parents who experienced canine cancer, one in three chose to treat their dog, even though the outcome is often uncertain.

NO.	BEHAVIORS BEFORE TREATMENT	% YES*
1	Moving more slowly	78%
2	Lacking energy	71%
3	Sleeping more	63%
4	Lower quality of life	63%
5	Eating less	58%
6	Losing weight	50%
7	Seeming depressed	46%
8	Needing pain medication	43%
9	Difficulty breathing	27%
10	Diarrhea	25%
11	Vomiting	23%
12	Bleeding	21%
13	Fever	7%

NO.	TREATMENT RECEIVED	% YES*
1	Surgery	65%
2	Other type of medication	27%
3	Chemotherapy	24%
4	Natural herbs or nutritional supplements	12%
5	Radiation	9%



95%

of respondents whose dog had cancer report their dog had access to a backyard or front yard.

32%

of respondents who experienced canine cancer chose to have their dog treated.

75%

of respondents who chose to have their dog treated are satisfied or very satisfied with their treatment experience.

39%

of dogs with cancer were cured or in remission.

90%

of dogs whose treatment wasn't successful died of cancer or of complications from it.

*Dog parents with canine cancer experience when asked about specific behaviors of their dog before cancer treatment

Age, Cost and Likelihood of Success Among Top Treatment Concerns

Low likelihood of success and high cost of treatment are among the top three barriers to canine cancer treatment. They also top the list of concerns from people who chose to get their dog treated. Lack of pet insurance coverage ranks seventh for both barriers to treatment and concerns, even though 92% of respondents don't have such a policy.

Barriers to Cancer Treatment

NO.	REASONS FOR NOT TREATING DOG	% YES*
1	Low likelihood of the cancer treatment success	59%
2	Dog's age	54%
3	High cost of cancer treatment	39%
4	Discomfort dog would experience due to side effects from cancer treatment	38%
5	Veterinarian/veterinarian oncologist's recommendation not to treat	31%
6	Negative long-term impact of the cancer treatment on dog's quality of life	28%
7	Lack of pet insurance coverage	20%
8	Location of cancer treatment	10%
9	Treatment options available	8%
10	Need for dog parent to manage their dog's cancer treatment side effects	6%
11	Difficulty scheduling cancer treatment visits	3%

*Dog parents who didn't move forward with treatment (n=444, or 68% of all dog owners who experienced canine cancer)

Concerns Prior to Cancer Treatment

NO.	CONCERNS OF THOSE WHO SOUGHT TREATMENT	%YES**
1	High cost of cancer treatment	59%
2	Discomfort dog would experience due to side effects from cancer treatment	56%
3	Low likelihood of the cancer treatment success	50%
4	Dog's age	48%
5	Negative long-term impact of the cancer treatment on dog's quality of life	36%
6	Treatment options available	33%
7	Lack of pet insurance coverage	29%
8	Need for dog parent to manage their dog's cancer treatment side effects	23%
9	Location of cancer treatment	22%
10	Difficulty scheduling cancer treatment visits	9%
11	Veterinarian/veterinarian oncologist's recommendation not to treat	7%

**Dog parents who chose to get their dog treated for cancer (n=208, or 32% of all dog owners who experienced canine cancer)

Age is an important factor in the decision to treat a dog. The data shows that, on average, once a dog reaches **six years old**, its dog parents become less likely to choose to treat their pet.

92%

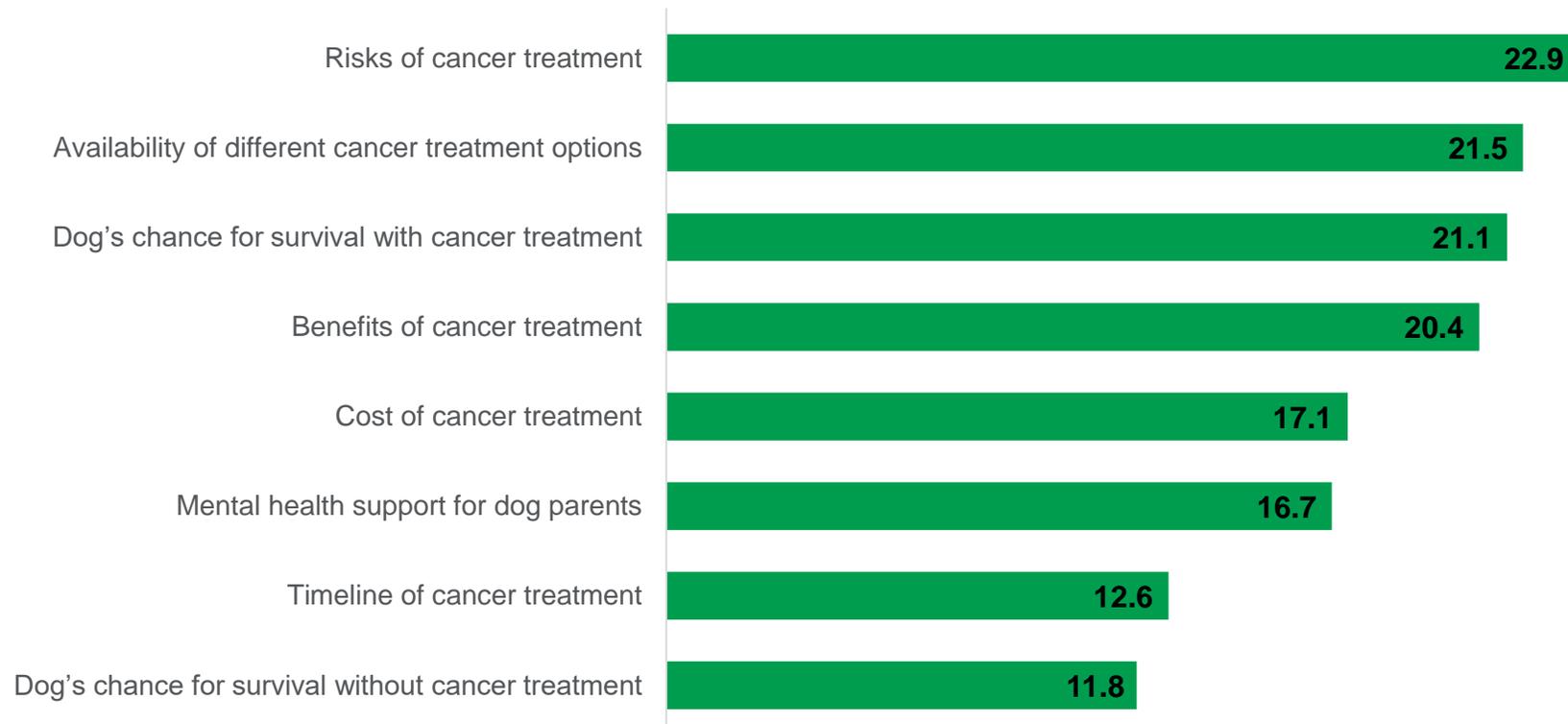
of respondents whose dog had cancer didn't have pet insurance when it happened.

Veterinarians Play a Critical Role in the Overall Treatment Experience

The more information veterinarians provide and the more they succeed at managing expectations from the start, the better the overall experience is for dog parents.

How Information Satisfaction Correlates With Positive Overall Experience

The vast majority of people who are very satisfied with the information provided by their vet about the **side effects of cancer treatment** are likely to be very satisfied or satisfied with the **overall cancer treatment experience**.

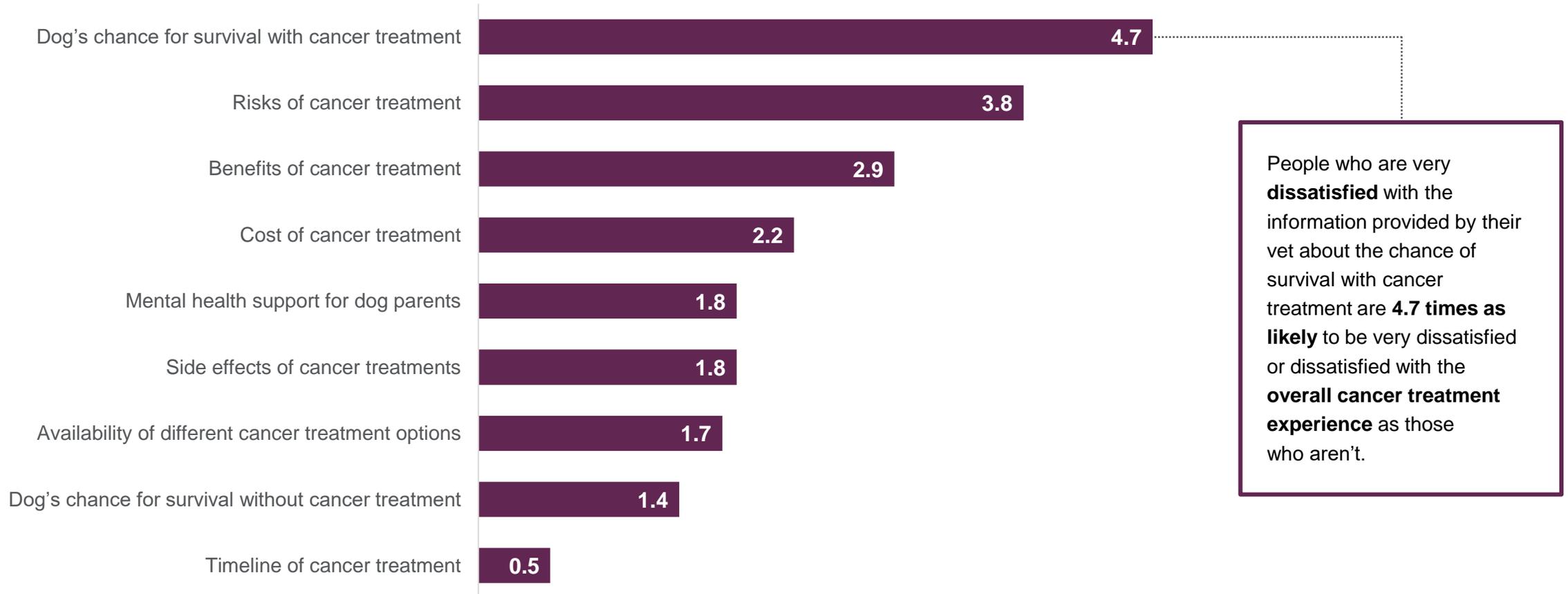


People who are very **satisfied** with the information provided by their vet about the risks of cancer treatment are **22.9 times as likely** to be very satisfied or satisfied with the **overall cancer treatment experience** as those who aren't.

Veterinarians Play a Critical Role in the Overall Treatment Experience

The more information veterinarians provide and the more they succeed at managing expectations from the start, the better the overall experience is for dog parents.

How Information Satisfaction Correlates With Negative Overall Experience



Managing Chemotherapy Side Effects: Perception Is Worse Than Reality

When asked to imagine how difficult chemotherapy side effects would be to manage for their household, dog parents tend to have a more negative view of the management of those than people who report on their direct experience. Pain is seen as the most feared and hardest to manage side effect of chemotherapy.

Most Difficult Chemo-Related Side Effects to Manage as Hypothetically Perceived by All Dog Parents

NO.	SIDE EFFECT	%*
1	Pain	60%
2	Reduced mobility	46%
3	Urinary incontinence	43%
4	Diarrhea	41%
5	Vomiting or nausea	39%
6	Decreased appetite	20%
6	Fatigue, lethargy or lack of energy	19%

Most Difficult Chemo-Related Side Effects to Manage Reported by Dog Parents With Cancer Experience

NO.	SIDE EFFECT	%*
1	Pain	34%
2	Fatigue, lethargy or lack of energy	17%
2	Reduced mobility	17%
3	Urinary incontinence	15%
3	Vomiting or nausea	15%
4	Diarrhea	13%
4	Decreased appetite	13%

**Respondents who answered “difficult” or “very difficult” when asked about their perception of the management of chemotherapy side effects*

Most respondents whose dogs suffered from chemo-related side effects chose **to use medications** prescribed by their veterinarian (n=34).

Canine Cancer Is a Stressor to the Wellbeing of Dog Parents

Pet parents tend to report a range of negative emotions and effects after their pets receive a cancer diagnosis. Those effects are more pronounced in pet parents who have developed a strong emotional bond with their dog.

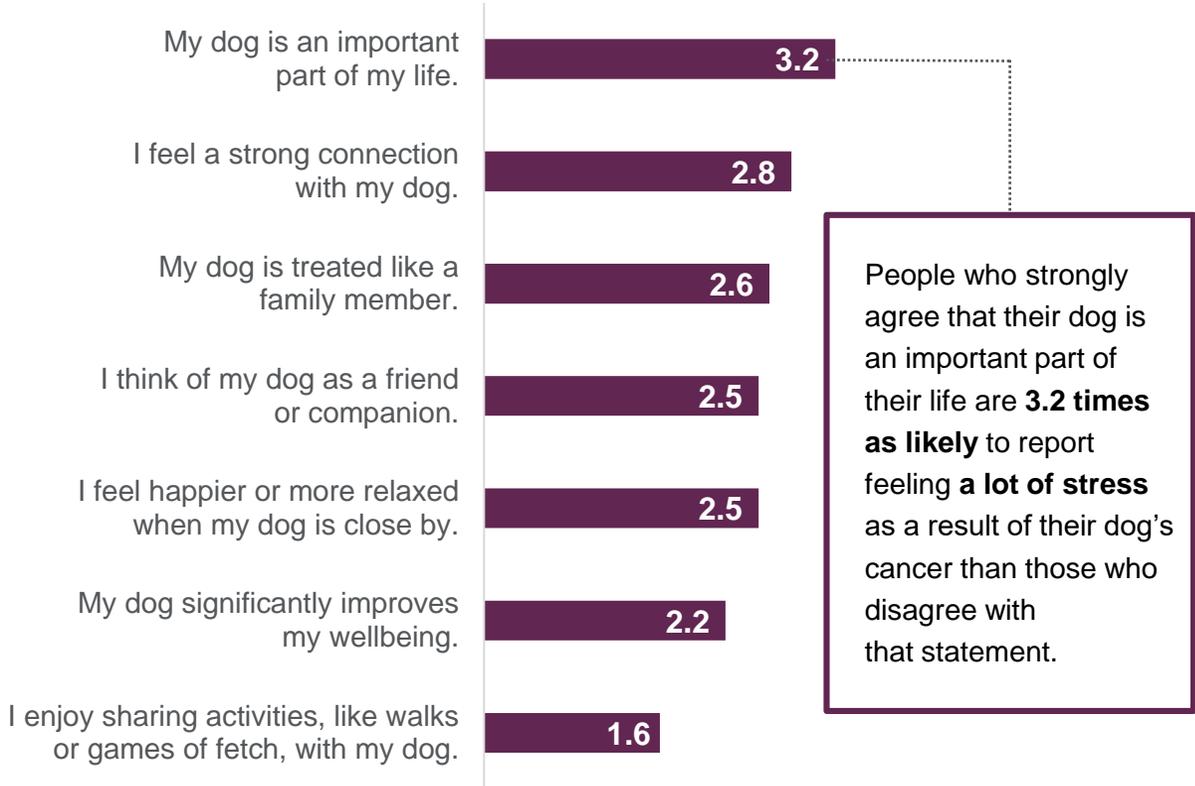
NO.	FEELINGS EXPERIENCED DURING DOG'S CANCER	% A LOT
1	Stress	63%
2	Feeling down or depressed	58%
3	Worrying about ability to pay for the treatment	29%
4	Missing work or other important obligations	10%

People who have dealt with their dog's cancer in the past tend to have a more pronounced recollection of feeling stressed, down or depressed than people who are currently experiencing it.

1 in 3 respondents (29%) had their quality of life heavily negatively impacted due to their dog's cancer (more than 7 on a scale of 1 to 10).

People who strongly agree that they think of their dog as a friend or companion are **seven times as likely to report feeling down or depressed** as a result of their dog's cancer than those who don't think so.

How Level of Attachment to Dog Correlates With Stress Experienced by Dog Parents Going Through Canine Cancer



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