



The real-world experience of CML patient treatments and daily life

Izumi no kai: Chronic Myeloid Leukemia Patients and Families Association

Hidehito Tamura
info@izumi-cml.jp

Table of Contents

1. Summary
2. Current status on medications (TKIs: Tyrosine kinase inhibitors)
 - 2-1. Use rate of TKIs by type
 - 2-2. Adverse effects of each TKI
 - 2-3. Continuation of TKI use
 - 2-4. Discontinuation of TKI use
 - * Considering discontinuation of medication
 - * What probability of success would encourage your participation in a clinical trial?
 - * Reasons for thinking about stopping medication
 - * Reasons for suspending medication
 - * Status of suspension
3. QOL status-treatment and daily life
 - * Difficulties in treatment
 - * Difficulties in daily life
 - * What do you find difficult in your work?
 - * Level of satisfaction with current life in general
4. Satisfaction and dissatisfaction with doctors
5. Information and sources of information that patients use
6. Impact of Covid-19
7. Conclusions



1. Summary

Currently, five tyrosine kinase inhibitors (TKIs) are covered by insurance for use, and prognosis for patients with chronic CML has dramatically improved. However, patients must take the medication for a long period of time. They also face more challenges such as adverse events due to off-target side effects, identifying a TKI that works best for each individual, a fertility issue in younger patients, and the high cost of treatment.

Additionally, doctors and patients have a different perception of adverse events, and there are different attitudes about whether the focus of treatment should be on cure or care. To achieve synergy between doctors and patients with a shared goal, it is necessary to understand the patients' real-world experiences. The following survey was compiled to communicate patients' voices sharing their experiences.

Survey method: Mailing and online Survey period: April to May 2021

Regions and targets: Japan, Izumi no kai members and collaborators

Number of valid responses: 556 (511 mail survey, 45 online survey); total number of mailings: 832

The data was compiled mainly from the mail survey data. In order to ensure objectivity, we commissioned a third-party research company to compile the survey data.



2. Current status on medications (TKIs: Tyrosine kinase inhibitors)

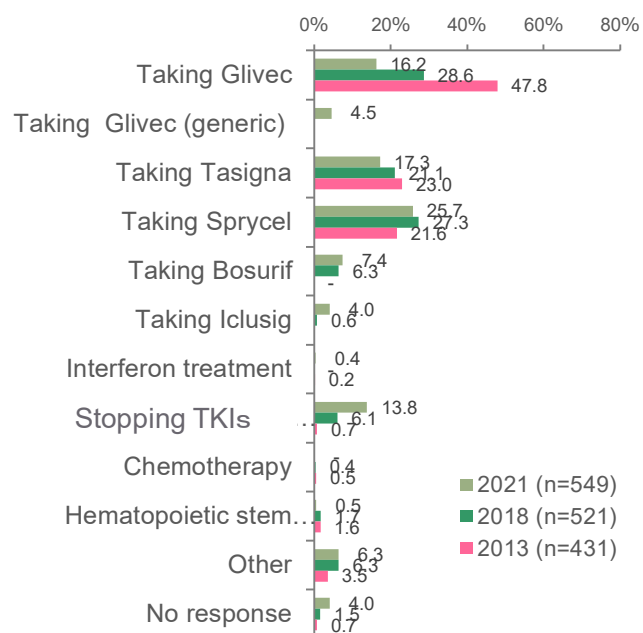
- The emergence of multiple therapeutic TKIs means more options for patients, which is a welcome development. However, each medication has a variety of different side effects.
- Doctors and patients have a different perception on the impact of side effects and which ones pose a problem and heavy burden.
- Half of the patients continue to take the same medication from the beginning. While each patient needs to quickly identify the most suitable medication among available TKIs, there is no shortcut to doing so. → Hope for a new method of drug efficacy assessment using fluorescence bioimaging technology.
- High expectation and desire to participate in the Stopping TKI treatment clinical trials. However, since those trials are conducted separately, it is difficult to see the whole picture.



2-1. Use rate of TKIs by type

● We have seen a significant decrease in patients who take Glivec from previous surveys. Use decreased from 48% in 2013 to 29% in 2018 and now stands at 16%. This is due to the increased number of TKIs that became available and more patients trying to suspend the medication. Bosurif is slightly up to 8%. When analyzed by gender and age, Glivec is most commonly taken by patients (60s or older) of both genders. Meanwhile, slightly more men take Sprycel than women, and women are more likely to take Tasigna. This time, more people said that they participated in the “stopping TKI therapy trials,” and a noticeably higher number of female patients in their 40s were among the participants.

Stopping TKIs



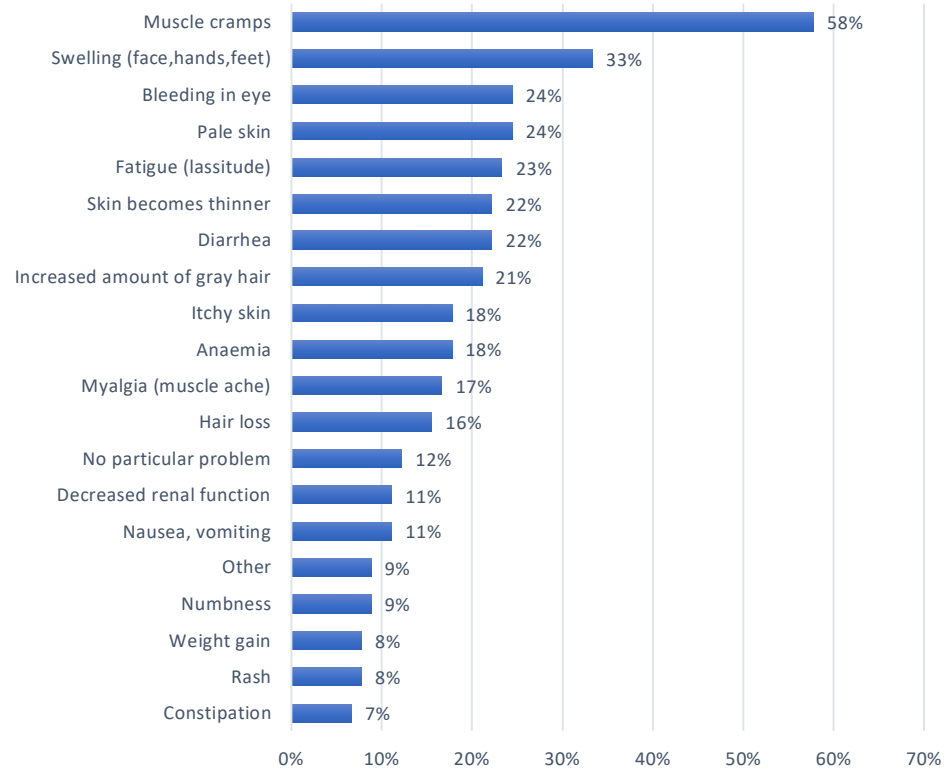
	Total	Male total	~30s	40s	50s	60 and older	Female total	~30s	40s	50s	60 and older
n	549	296	43	38	79	136	253	33	38	61	121
	16.4	17.9	11.6	18.4	16.5	20.6	14.6	6.1	10.5	9.8	20.7
	4.4	4.7	2.3	2.6	5.1	5.9	4.0	-	2.6	4.9	5.0
	17.5	14.9	16.3	10.5	16.5	14.7	20.6	18.2	13.2	26.2	20.7
	25.7	29.1	41.9	34.2	31.6	22.1	21.7	24.2	31.6	18.0	19.8
	7.5	8.4	4.7	10.5	8.9	8.8	6.3	12.1	2.6	8.2	5.0
	3.8	2.7	-	2.6	2.5	3.7	5.1	12.1	5.3	4.9	3.3
	0.4	9.3	-	-	-	0.7	0.4	-	2.6	-	-
	10.6	10.1	9.3	10.5	8.9	11.0	11.1	15.2	21.1	11.5	6.6
	-	-	-	-	-	-	-	-	-	-	-
	0.5	0.7	-	2.6	1.3	-	0.4	-	2.6	-	-
	9.7	9.1	9.3	5.3	7.6	11.0	10.3	3.0	2.6	13.1	13.2
	3.6	2.0	4.7	2.6	1.3	1.5	5.5	9.1	5.3	3.3	5.8

Note: Glivec (generic) dose is a new item in 2021.

2-2. Adverse effects of each TKI 1/3

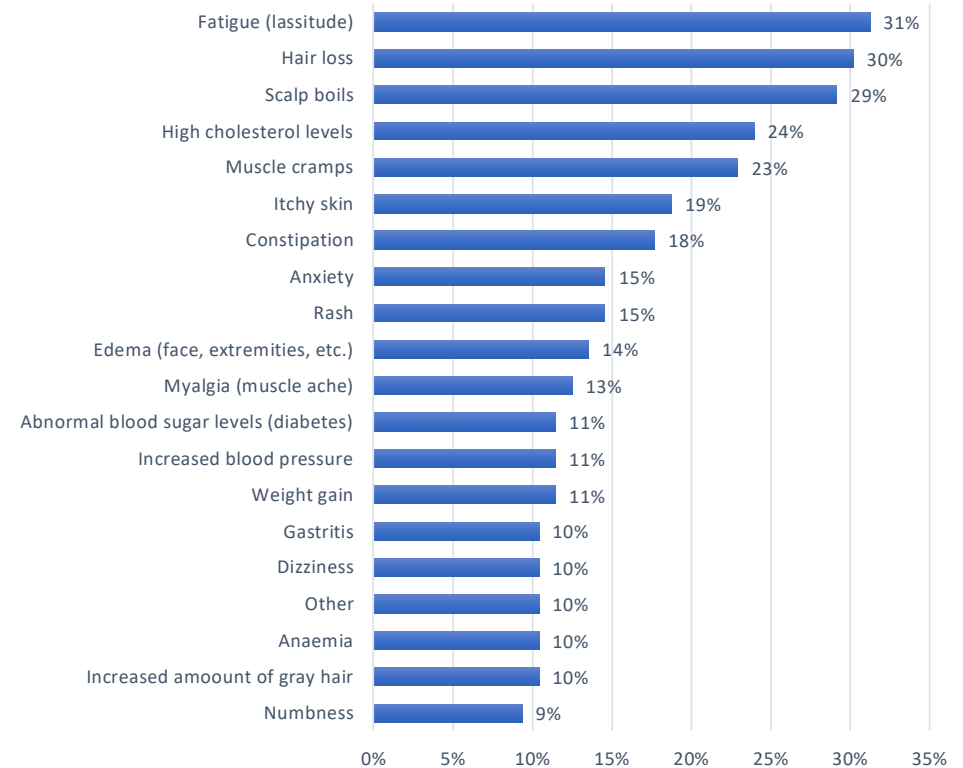
GLIVEC SIDE EFFECTS (PERCENTAGE BY SYMPTOM)

N=90



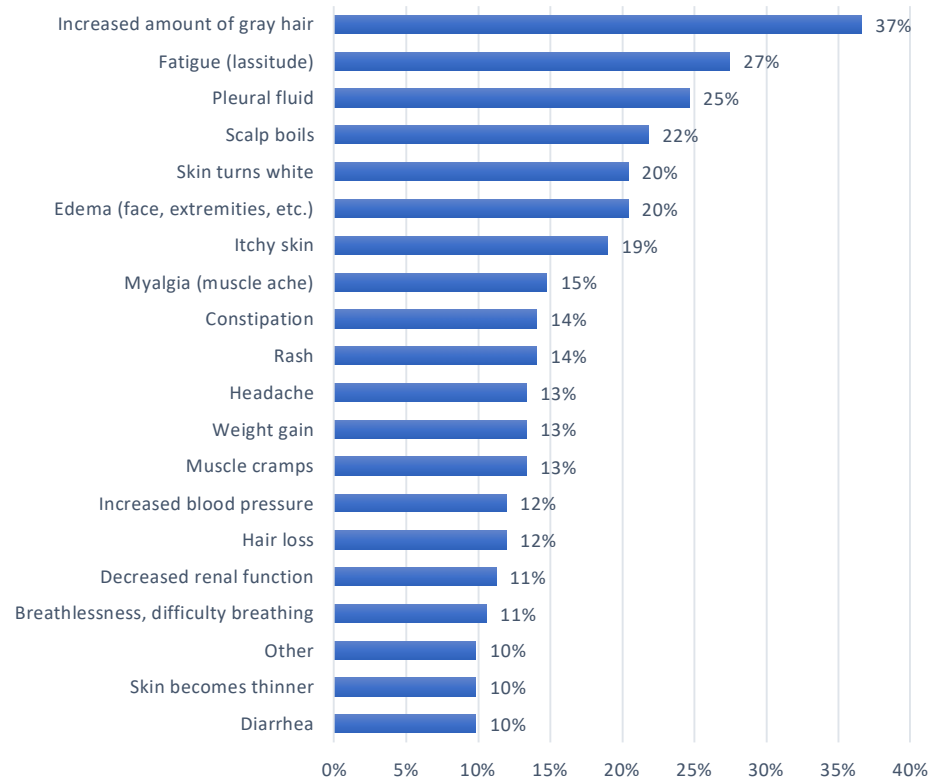
TASIGNA SIDE EFFECTS (PERCENTAGE BY SYMPTOM)

N=96

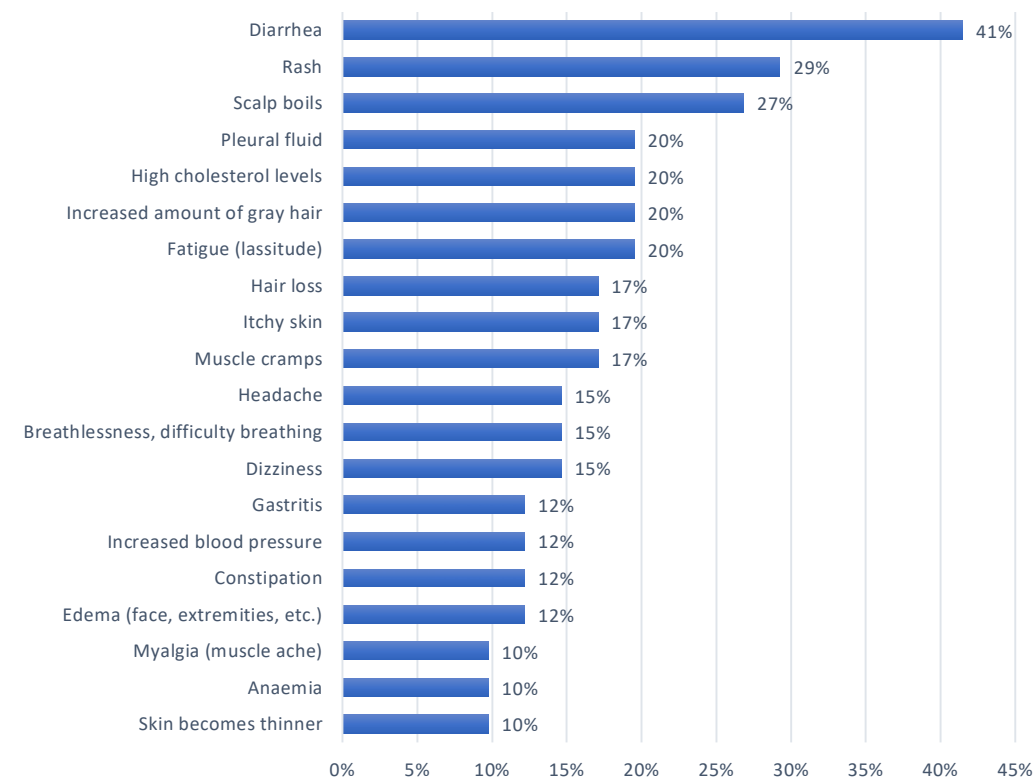


Adverse effects of each TKI 2/3

SPRYCEL SIDE EFFECTS (PERCENTAGE BY SYMPTOM)
N=142

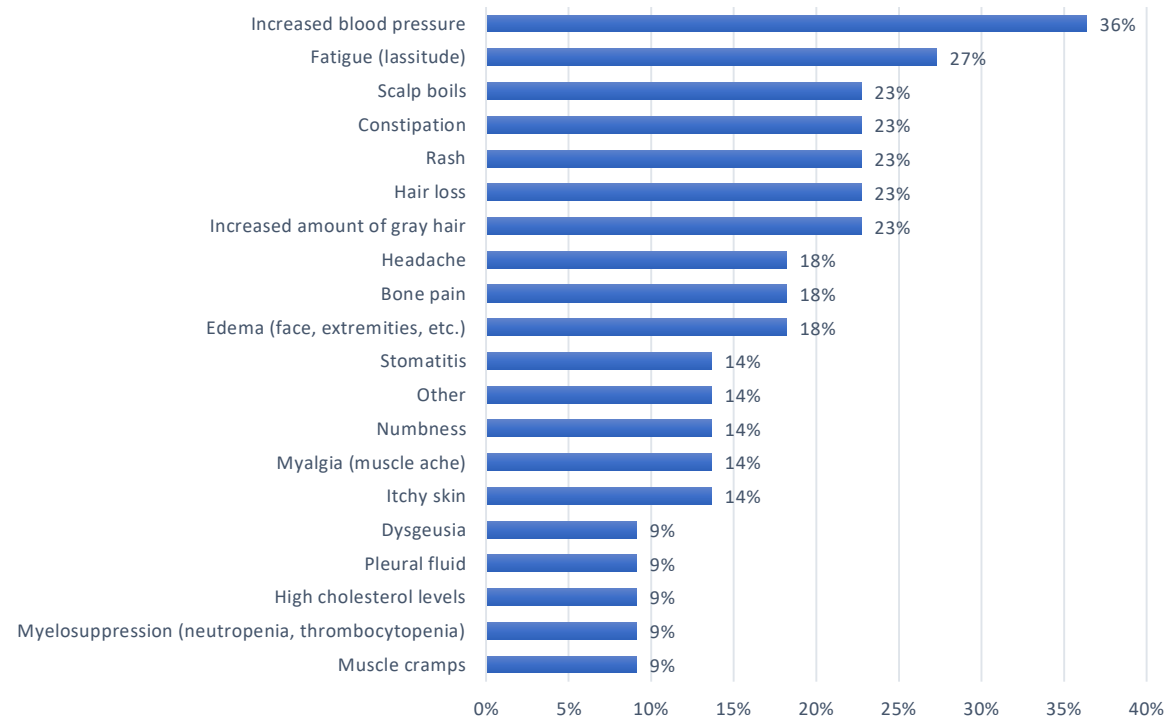


BOSURIF SIDE EFFECTS (PERCENTAGE BY SYMPTOMS)
N=41



Adverse effects of each TKI 3/3

Iclusig Side Effects (Percentage by Symptom) N=22



2-3. Continuation of TKI use

- The increased number of available TKI medications gives patients more choices and reassurance, but it may take a long time to find the most suitable TKI for an individual patient. The survey results showed two types of patients: those who keep taking the same TKI and those who switched to a different TKI during the treatment course. The reason for the change is due to the lack of effectiveness or side effects. Switching to a different TKI makes patients worry about the uncertainty of its effectiveness and unknown side effects. A better way to find the most suitable TKI for each patient without having patients continue trying is highly desirable.
→The FRET (fluorescence resonance energy transfer) –based drug sensitivity test to evaluate the efficacy of molecular targeted medicine may be useful (Developed by the Graduate School of Medicine, Hokkaido University).
- Among those who changed their medicine during the treatment course, 60% changed their medicine once, 28% changed twice, 11% changed three times, and 2% changed four times.

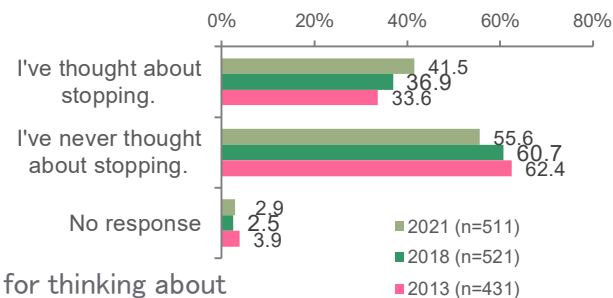
Number of respondents		Number of patients who keep using the first medication	Number of patients who change medication		Changed medication ONCE	Changed medication TWICE	Changed medication THREE times	Changed medication FOUR times
90	16.20%	72	18		14	6	0	1
25	4.50%	11	14		11	3	0	0
96	17.30%	40	56		33	18	5	0
143	25.70%	87	56		41	12	2	1
41	7.40%	1	40		19	12	8	1
22	4.00%	1	21		5	7	8	1
2	0.40%	0	2		2	0	0	0
77	13.80%							
3	0.50%							
35	6.30%							
22	4.00%							
556		212	207		125	58	23	4
		419						
		51%	49%		60%	28%	11%	2%



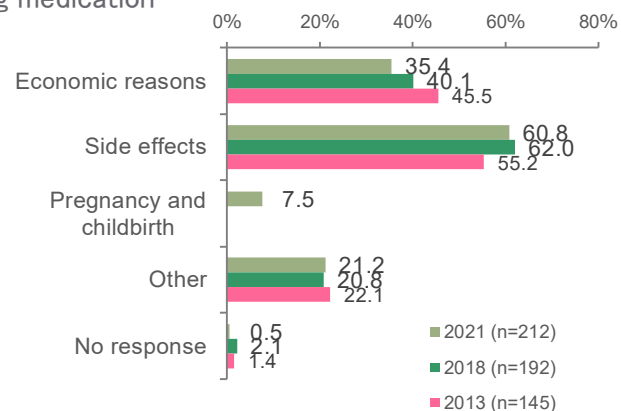
2-4. Discontinuation of TKI use 1/2

- Forty-two percent of respondents said they had considered discontinuing their medication. When analyzed by gender and age, more women than men have thought about stopping their medication, and more than 50% of those in their 40s and 50s have thought about discontinuing the medication.
- Thirty-six percent of respondents cited "financial reasons," and 61% cited "side effects" as reasons for the discontinuation.
- In the previous survey, 62% of respondents cited "side effects," which was the top reason, followed by "financial reasons" (40%). Although fewer respondents cite "financial reasons" as a factor year after year, the problem remains.

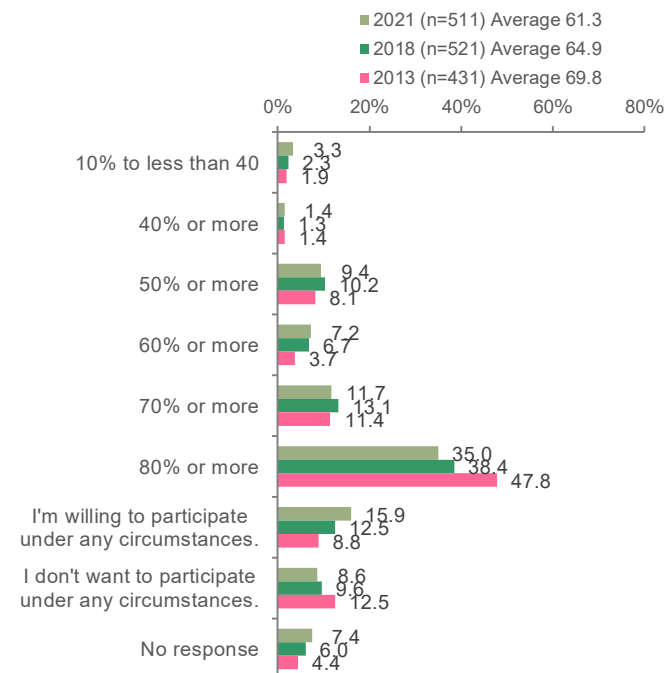
Considering discontinuation of medication



Reasons for thinking about stopping medication

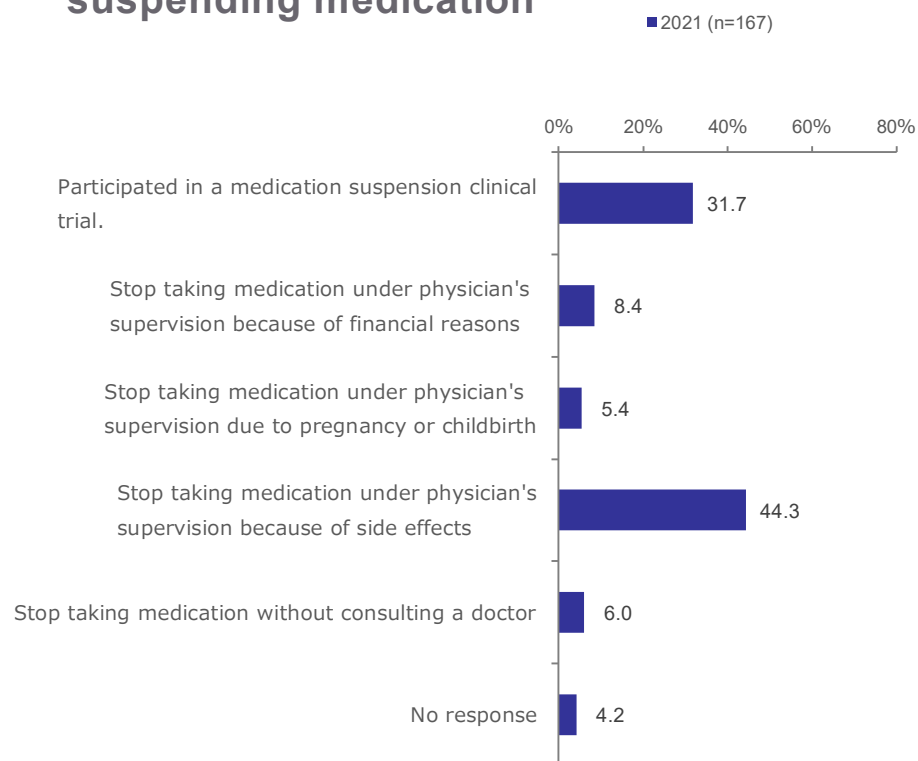


What probability of success would encourage your participation in a clinical trial?

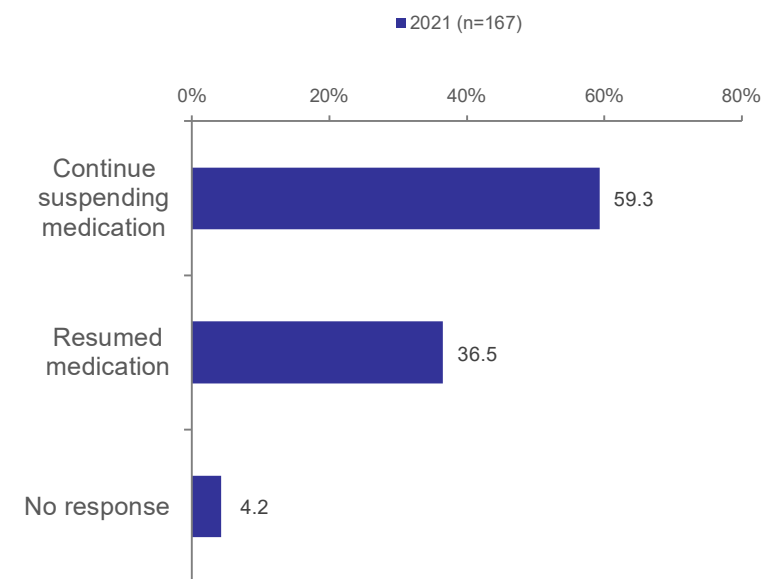


Discontinuation of TKI use 2/2

Reasons for suspending medication

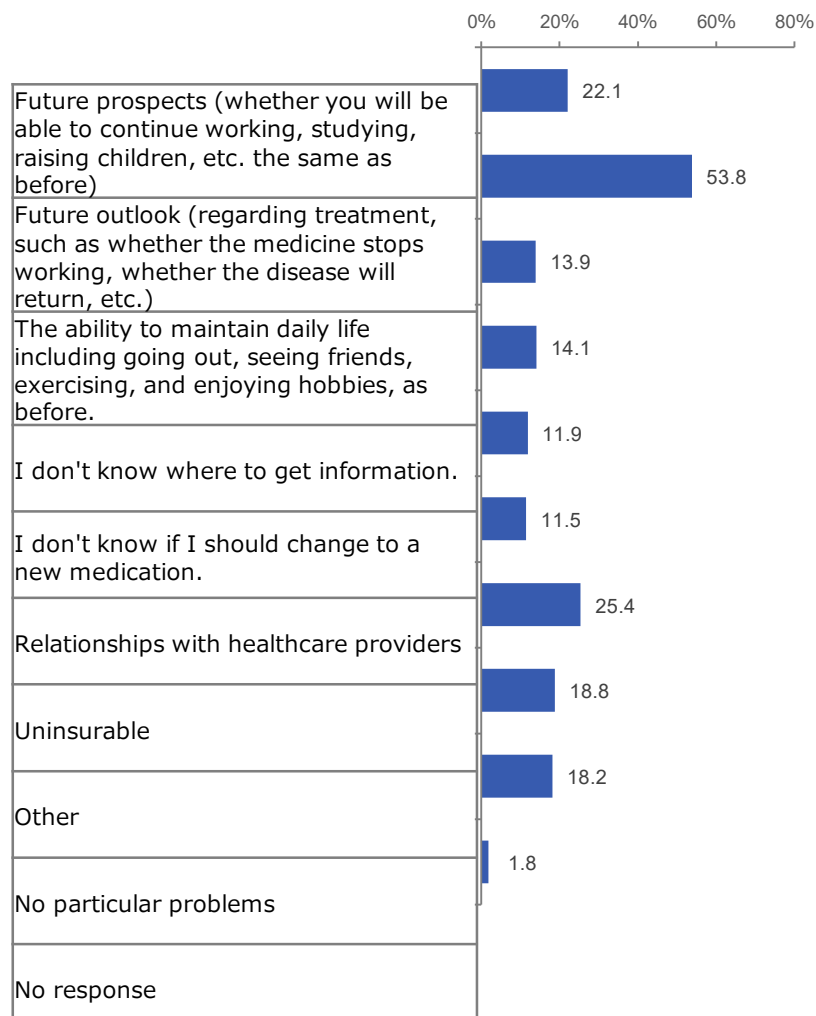


Status of suspension

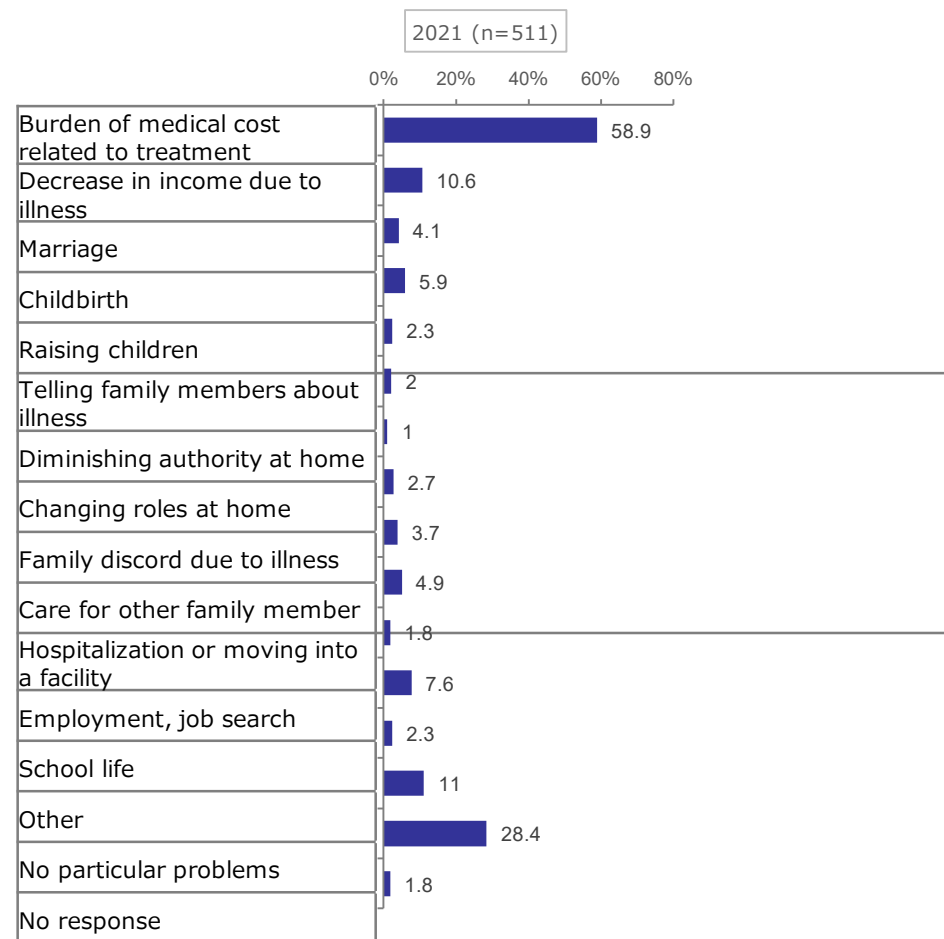


3. QOL status-treatment and daily life 1/2

Difficulties in treatment

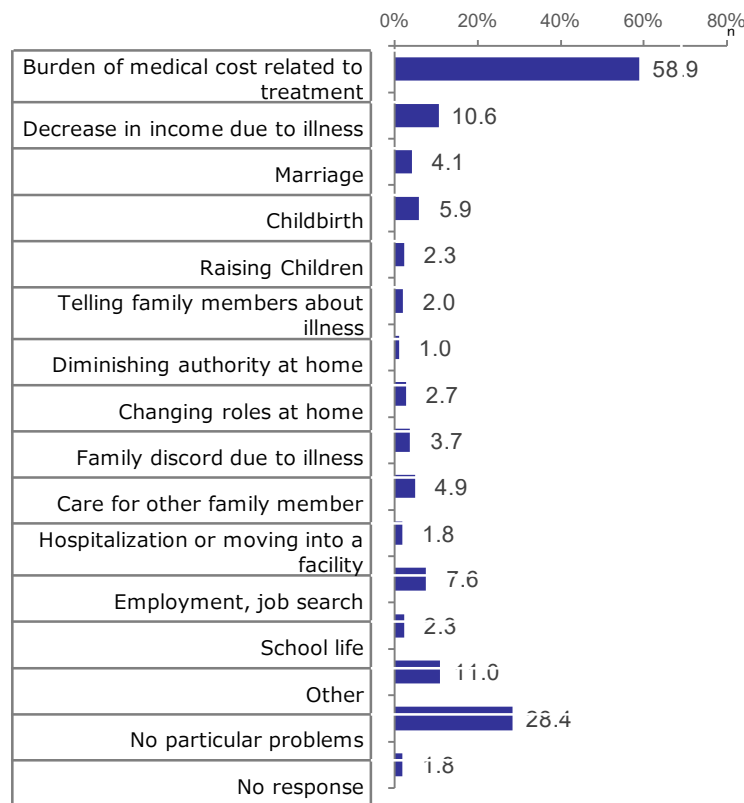


Difficulties in daily life

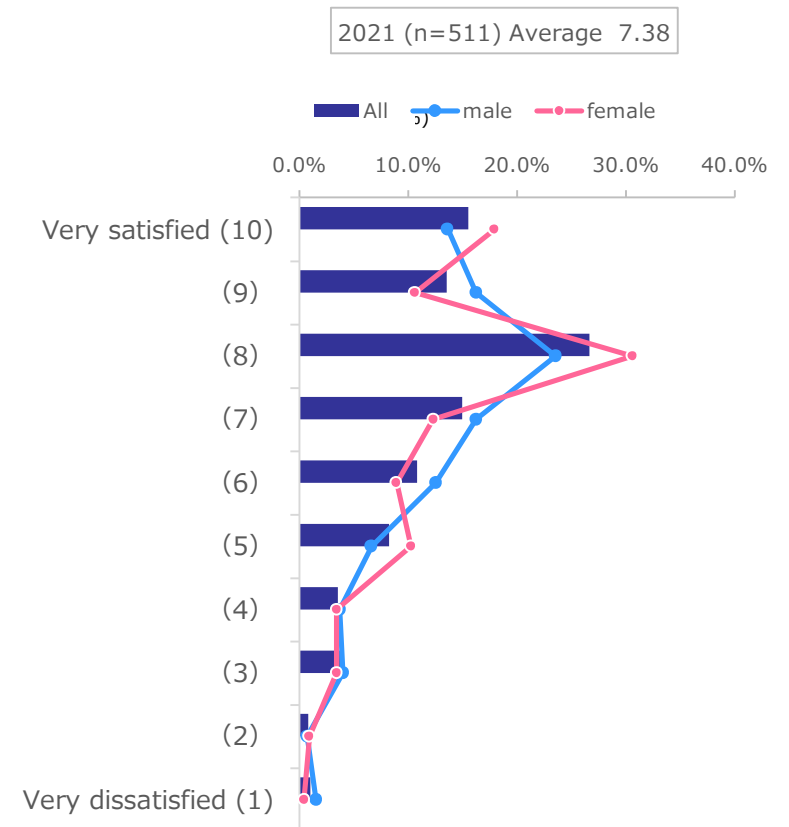


QOL status-work and in general 2/2

What do you find difficult in your work?



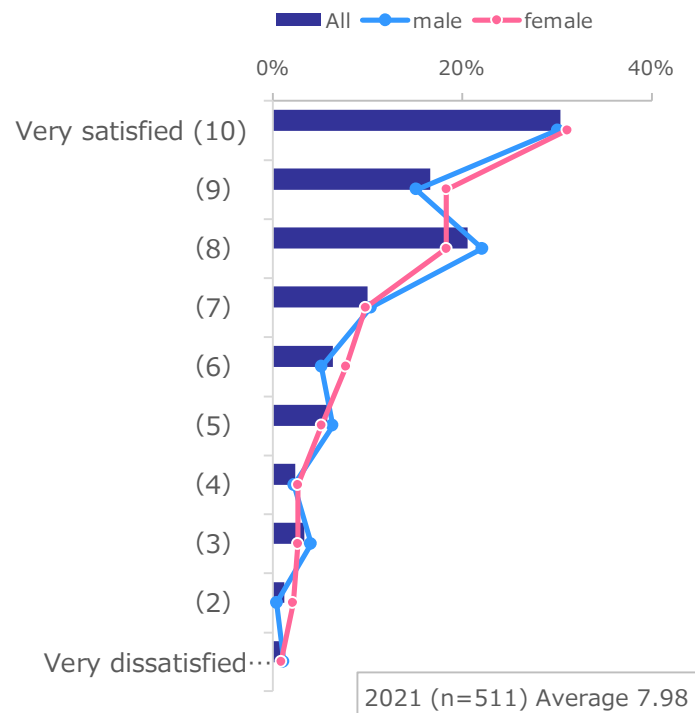
Level of satisfaction with current life in general



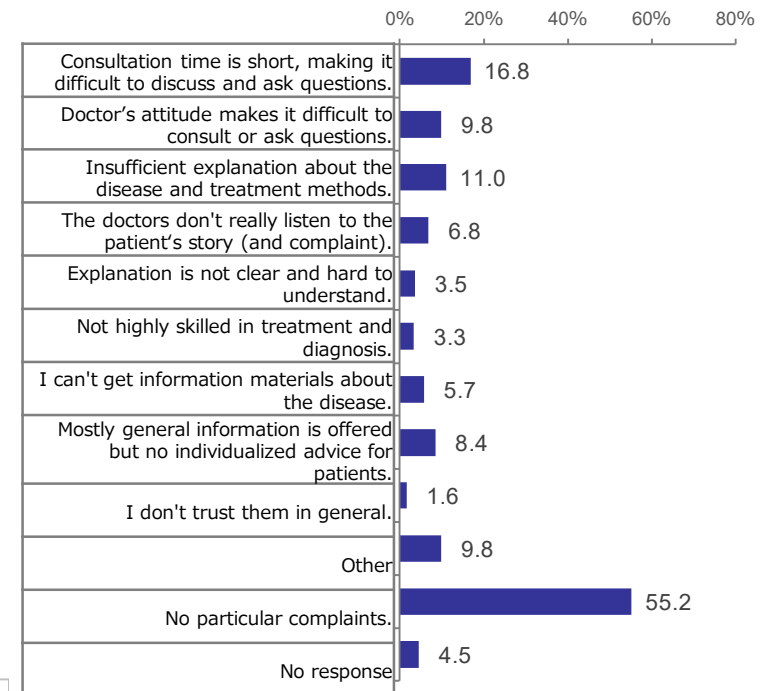
4. Satisfaction and dissatisfaction with doctors

- In terms of level of satisfaction with doctors, the average scores by gender and age groups were almost same at 7.97 for men and 7.98 for women.
- The top three age groups with high satisfaction with doctors are both men and women in their 30s with over 80% satisfaction, followed by women in their 40s.
- The most common complaint about doctors was short consultation time, which makes it difficult to discuss and ask questions.

Degree of satisfaction

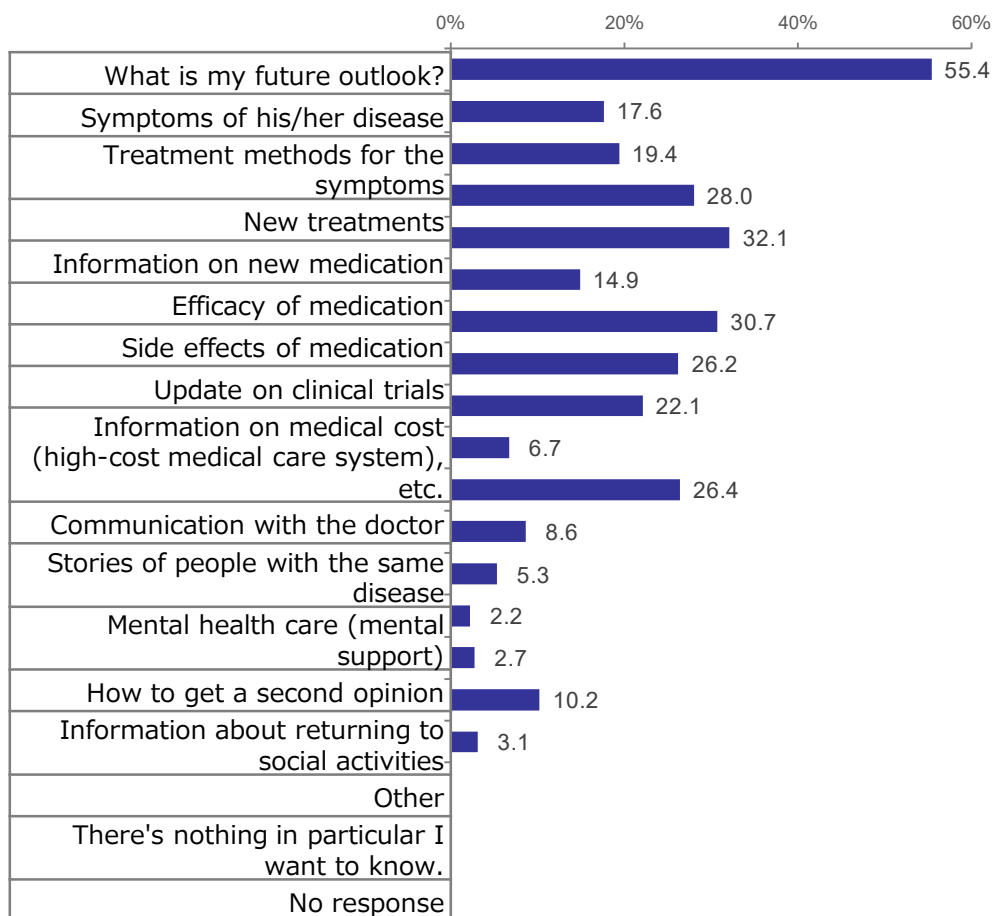


Dissatisfaction



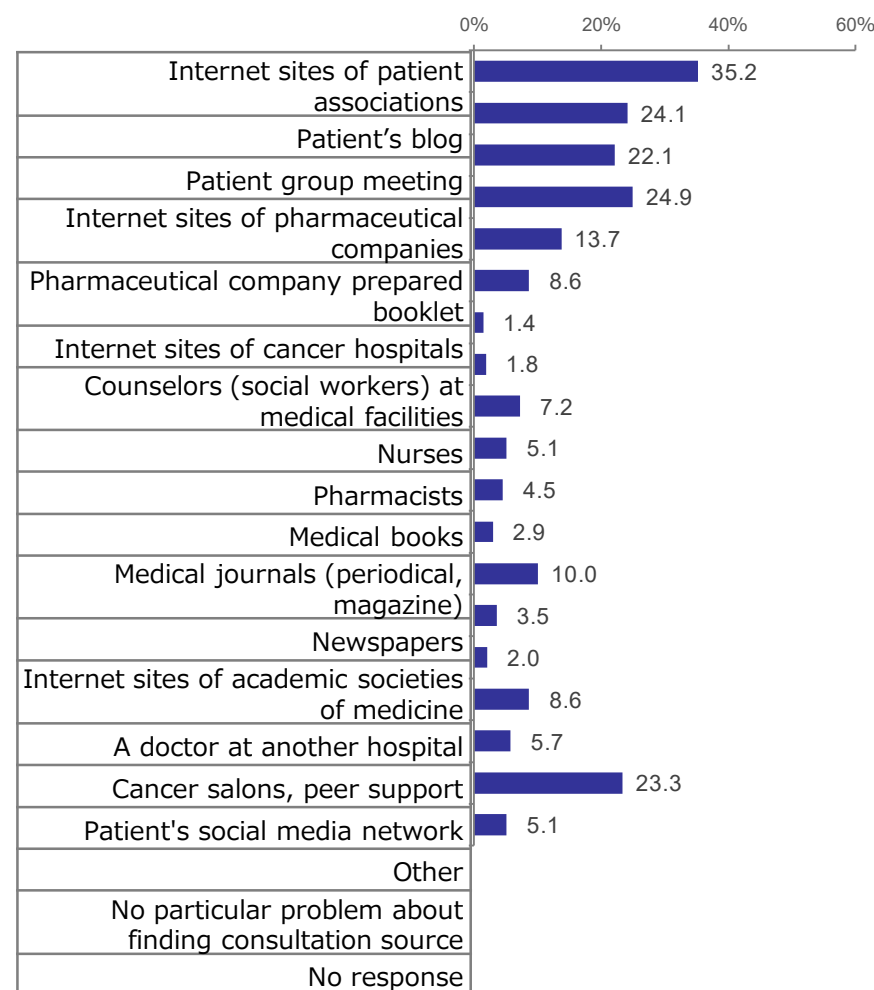
5. Information and sources of information that patients use

Information sought by patients



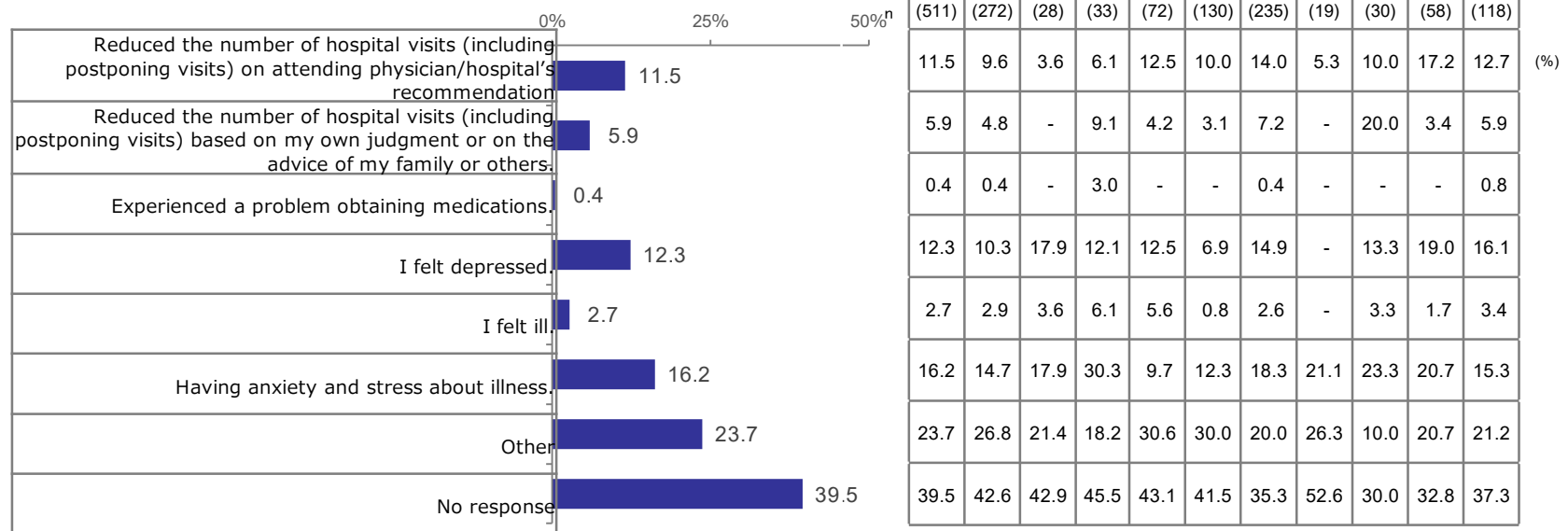
Sources of information that patients use

2021 (n=511)



6. Impact of Covid-19

- It has been more than a year and a half since the Covid-19 peril hit the world. It is not a short-term disaster, but a prolonged threat that impacts daily life. Patients suffer from the deep anxiety and stress of getting infected and developing a serious illness. They worry about adverse reactions from the Covid-19 vaccine as well. Additionally, they are seriously concerned that their on-going treatment may be postponed due to their hospital's Covid response.
 - Under current conditions, patients said that the most common impact of coronavirus was "anxiety and stress about their own illness (16%)," followed by "feeling depressed (12%)" and "I reduced the number of hospital visits based on advise from my doctor or hospital (12%)."
- When analyzed by gender, women were slightly more likely to report these impacts. Meanwhile, those who answered, "I have anxiety and stress about my illness" were mostly found among men in their 40s.



7. Conclusions

- Thanks to TKIs, CML treatment has dramatically improved. However, patient quality of life (QOL), side effects from medications, and economic hardship caused by a long-term treatment tend to be overlooked.
- Patients tend to hesitate to ask doctors about coping strategies for side effects. More accumulation of know-how on medication dosage modification and side effect management are needed.
- Although some clinical trials have been suspended, patients are hoping that research will determine the conditions to maintain long-term TFR (treatment free remission) .
- Use of a long-term prescription is one way to ease patients' financial burden, but the availability of such prescription depends on each medical facility. Patients would like to seek a medical provider's understanding in offering a long-term prescription.
- While patients face a variety of challenges, patients need to empower and advocate for themselves in seeking better treatment and a better life.
- Although the situation around CML has improved, it is still a disease that should not be underestimated. I would like to conclude with what one doctor explained to me: "CML is not a cat but a tiger."

