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# Minimization of Treatment Toxicity/Side Effects and Their Impact on Quality of Life in Patients with ER+/HER2- Metastatic Breast Cancer (mBC)

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## Introduction

- Side effects of cancer treatment are underreported in clinical trials,<sup>1,2</sup> as well as by patients as found in an FDA patient advocacy panel<sup>3</sup>
- Side effects from treatment can also have a negative impact on quality of life (QoL), and can influence patients' treatment decisions

## Objective

To better understand the reporting accuracy and impact of treatment toxicities/side effects among patients with ER+/HER2- metastatic breast cancer (mBC)

## Design

- The 55-question, online *ESR1* Quality of Life Survey 3 (EQUALS 3) was emailed to US patients from the Cure Media Group and authors' contacts (to improve minority patients' participation), and posted on private Facebook and Twitter groups of patients with mBC, for 2 weeks in June 2023
- Patients were eligible if they had ER+/HER2- mBC and had undergone treatment changes because of disease progression
- A \$10 gift card was given to participants at survey completion
- Survey answers were summarized descriptively

**Table. Patient demographics**

Characteristics		ER+/HER2- mBC (n=213)
Age, y	<40 yrs	19 (8.9)
	40-49 yrs	73 (34.3)
	50-59 yrs	72 (33.8)
	60-69	26 (12.2)
	≥70 yrs	23 (10.8)
Race/ethnicity, n (%)	Hispanic/Latino	103 (48.4)
	White	94 (44.1)
	Black/African American	9 (4.2)
	American Indian/Alaskan Native	4 (1.9)
	Declined to answer	3 (1.4)
Menopausal status, n (%)	Pre-menopause	73 (34.3)
	Post-menopause	82 (38.5)
	Perimenopause	33 (15.5)
	Uncertain	25 (11.7)
Living setting, n (%)	Urban	109 (51.2)
	Suburban	58 (27.2)
	Rural	46 (21.6)
Average household income, n (%)	<\$25,000	11 (5.2)
	\$25,000 to <\$50,000	45 (21.1)
	\$50,000 to <\$75,000	87 (40.8)
	\$75,000 to <\$100,000	29 (13.6)
	\$100,000 to <\$150,000	15 (7.0)
	≥\$150,000	9 (4.2)
	Declined to answer	17 (8.0)
Highest level of education, n (%)	Some high school	5 (2.3)
	High school	57 (26.8)
	Bachelor's degree	118 (55.4)
	Master's degree Doctoral degree	25 (11.7) 8 (3.8)
Primary oncologist, n (%)	Female	139 (65.3)
	Male	72 (33.8)
	Other	2 (0.9)

## Results

### Participant disposition and demographics

- 213 patients completed the survey; most were <60 years of age (77%), Hispanic/Latino (48%) or White (44%), peri-/postmenopausal (54%), and college educated (71%); most had income >\$50,000 (66%) and lived in urban areas (51%; **Table**)

### Breast cancer treatments

- Most patients were on second-line therapy (36%) or third-line or higher (51%)
- Current mBC treatments were endocrine therapy ± targeted therapies (71%), chemotherapy (11%), others (9%), and antibody-drug conjugates (8%)
- Most patients had a female oncologist (65%) who worked in an academic hospital (61%)

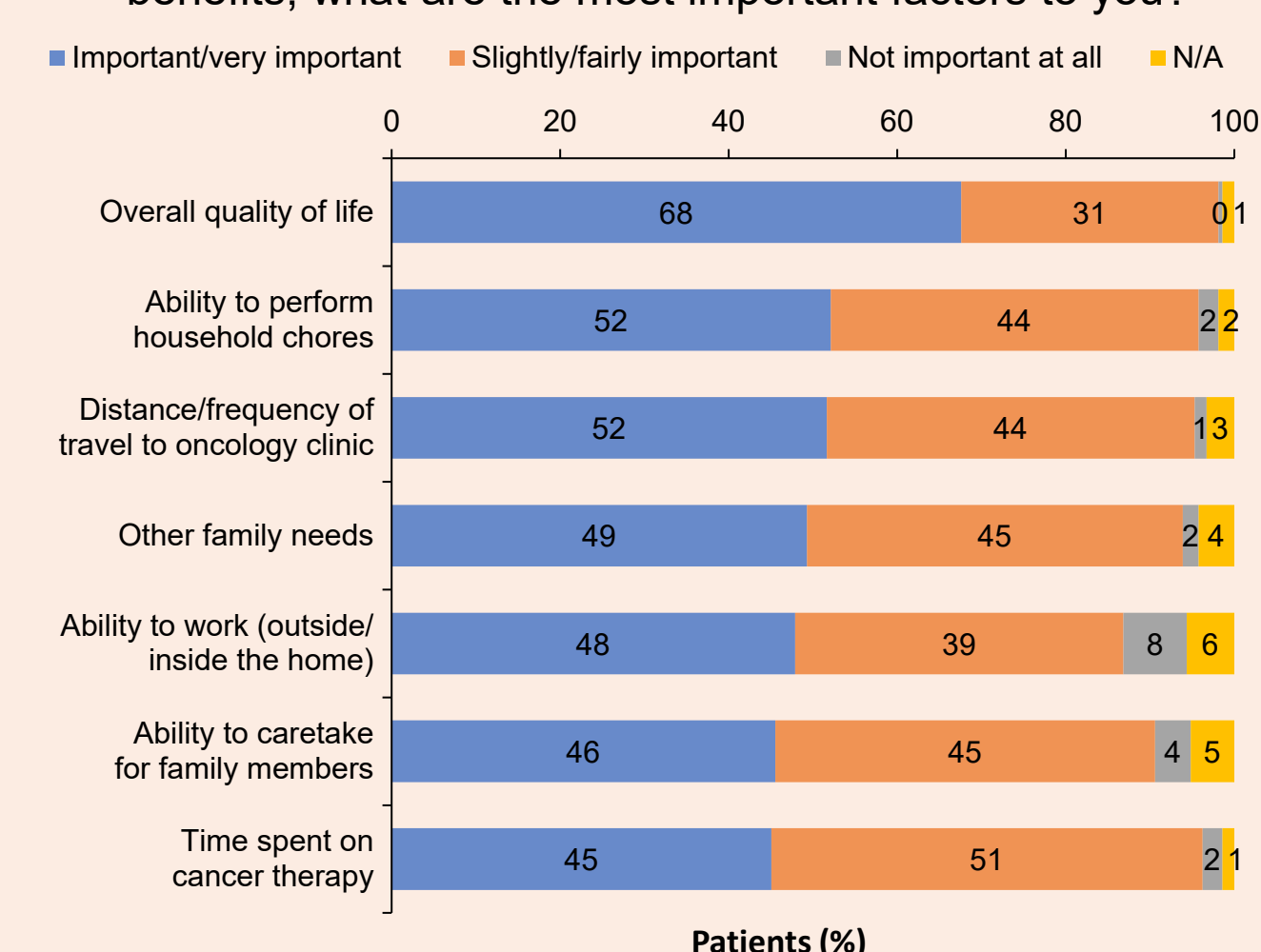
### Impact on quality of life

- QoL was reported as poor or very poor in 20% of patients
- Most patients (68%) considered QoL an important/very important consideration when making a treatment decision based on risks and benefits (**Figure 1**)
- The most common side effects with a negative impact on QoL were sexual dysfunction (45%), joint pain (38%), vaginal atrophy/dryness (36%), fatigue (33%), bone pain (31%), and hair loss (26%; **Figure 2**)
- Toxicities/side effects also had a negative impact on patients' anxiety (49%), career (46%), marriage (42%), finances (32%), housework (30%), and relationships (19%)
- Nearly half (46%) of patients said they have regretted taking a cancer medication because of the side effects

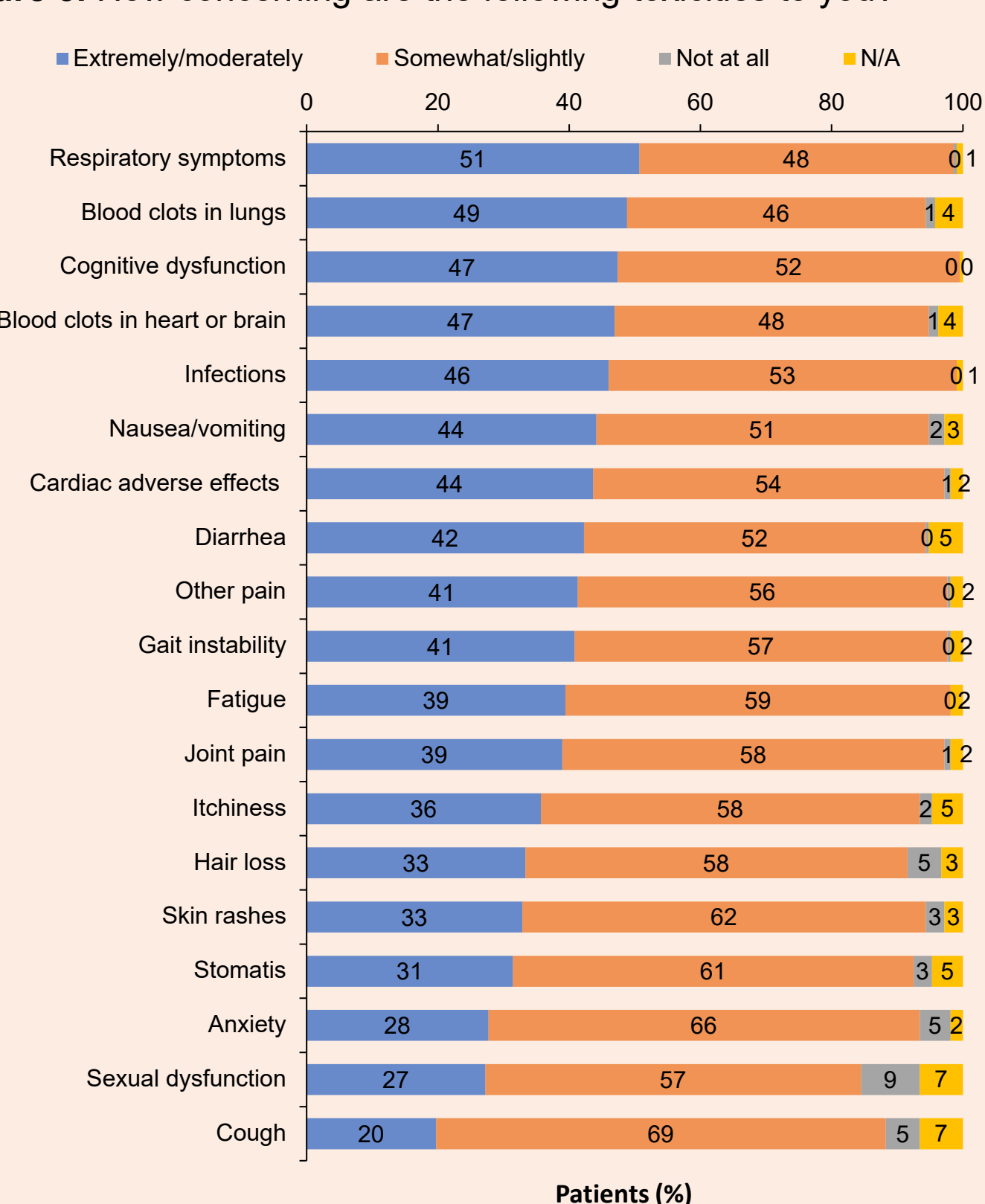
### Patient reporting of toxicity and side effects

- Surveyed patients reported toxicity concerns about serious to nuisance side effects; those most frequently reported as extremely/moderately concerning were respiratory symptoms (51%), blood clots in lungs (49%) or heart/brain (47%), cognitive dysfunction (47%), infections (46%), nausea/vomiting (44%), cardiac adverse effects (44%), diarrhea (42%), gait instability (41%), fatigue (39%), joint pain (39%), hair loss (33%), and sexual dysfunction (27%; **Figure 3**)
- While half (49%) of patients felt extremely/very comfortable speaking to their providers about treatment side effects, 62% reported minimizing side effects in team discussions
  - The top reasons for minimizing side effects were concern of being seen as a complainer (70%), a dose reduction (66%), and being taken off drug (65%; **Figure 4**)
  - Nearly half (47%) of patients minimized toxicity due to fear of being taken off a trial
- Almost half of patients (47%) did not even report certain side effects (**Figure 4**)
  - Top reasons for not reporting were concern of being seen as a complainer (63%), being taken off the drug (57%), and having reduced efficacy with a lower dose (51%)

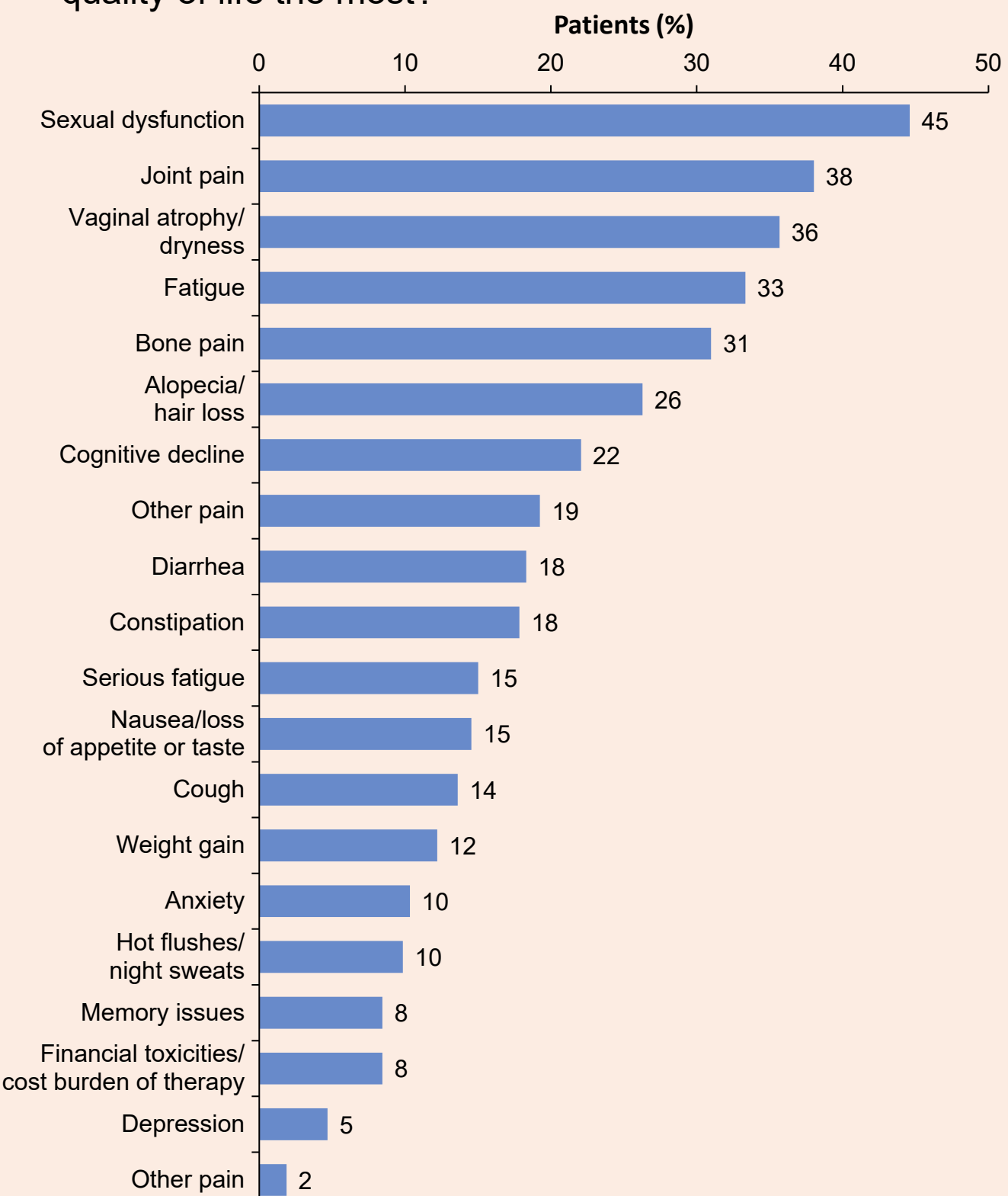
**Figure 1.** When making a treatment decision based on risks/benefits, what are the most important factors to you?



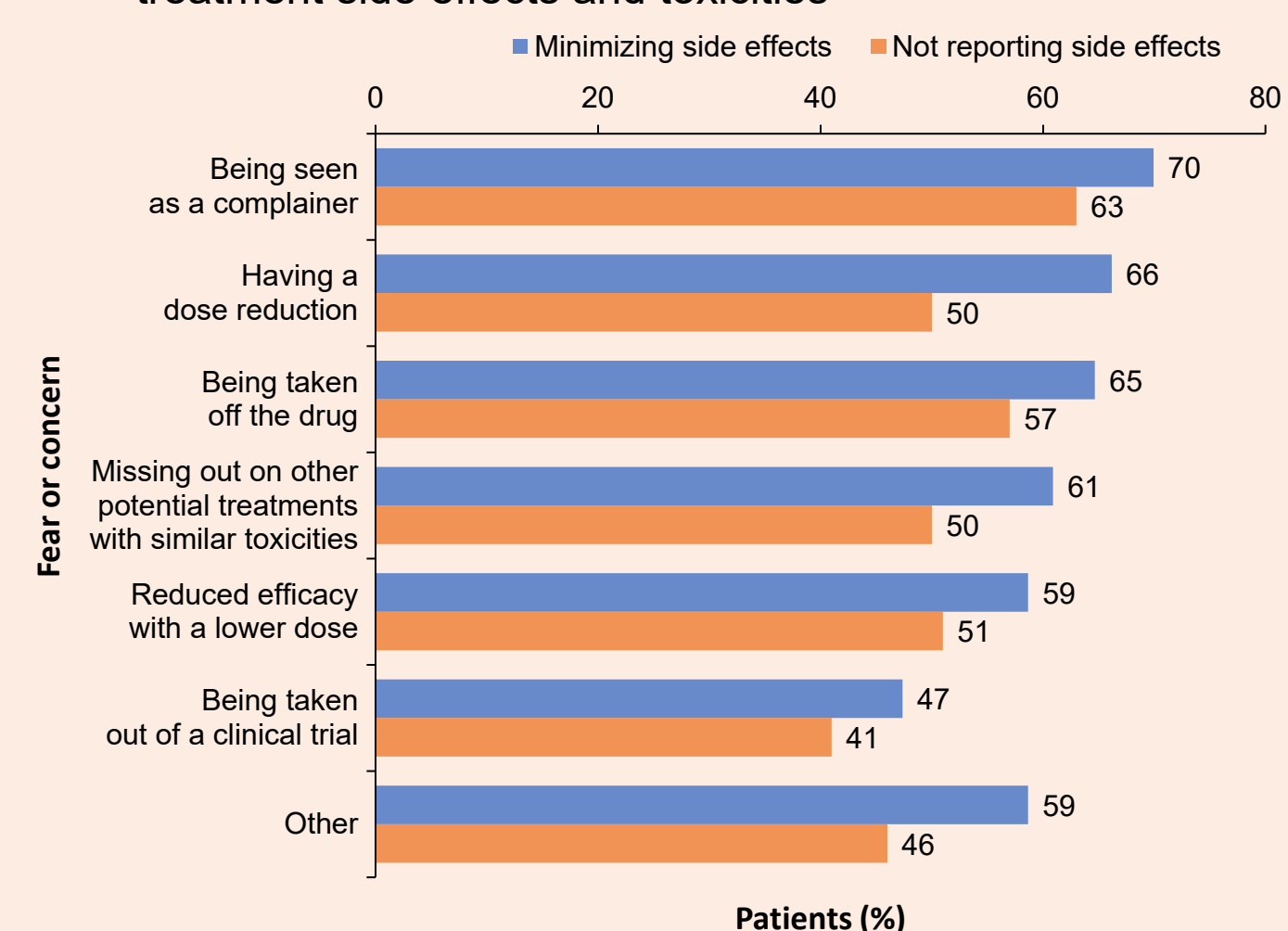
**Figure 3.** How concerning are the following toxicities to you?



**Figure 2.** Which side effects from cancer therapy have impacted your quality of life the most?



**Figure 4.** Reasons for minimizing (n=133) or not reporting (n=100) treatment side effects and toxicities



## Key Takeaways

- Quality of life and treatment toxicity are considered when choosing a treatment for ER+/HER2- mBC
- Side effects, including sexual function and vaginal symptoms, impact the QoL of patients
- Many patients with mBC minimize or do not report side effects for various fears and concerns

## Conclusions

- In this survey of patients with ER+/HER2- mBC predominantly taking endocrine therapy, most patients considered QoL and treatment toxicity when choosing a treatment for their mBC
- Most patients had minimized or hid side effects at some point for fear of negative perceptions from their providers, reduced treatment efficacy, or being taken off drug or out of a clinical trial
- 20% of patients reported poor QoL, and two of the top 3 side effects impacting QoL were urogenital in nature; this highlights the need for improved medication and supportive care
- Drug toxicity had major impacts on all aspects of patients' life, including psychosocial and physical health, relationships, and finances, which deserve our attention
- Clinical trials should routinely report the impact of dose intensity on outcomes so that treatment teams can educate patients about treatment side effects and can encourage dose reductions when necessary and safe to improve QoL
- Patients should be educated about the importance of fully reporting treatment side effects on and off clinical trials and the effects of any recommended dosing changes on safety and efficacy

## References

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