

Translating patient views into global assessments

Cutaneous Neurofibroma Working Group

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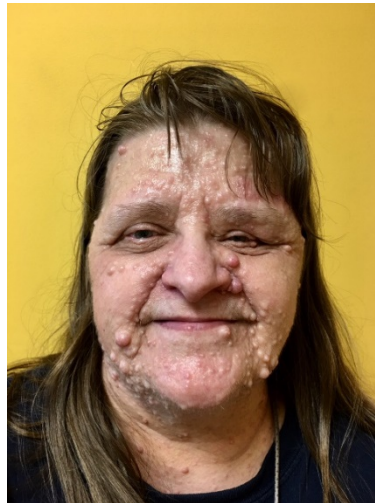
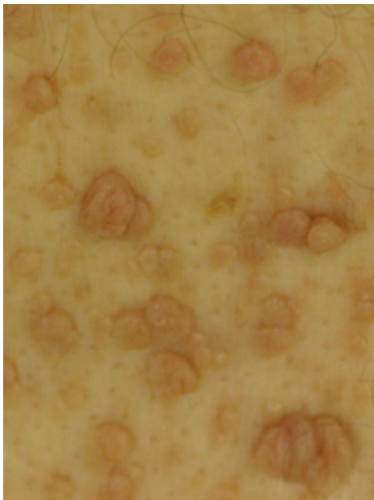
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Response Evaluation In Neurofibromatosis Schwannomatosis
INTERNATIONAL COLLABORATION

cNF background

- cNFs affect more than 99% of adults with NF1
- No malignant potential but have significant negative effects on quality of life
- Current treatment is limited, treat a subset of cNFs, and can result in scarring and future tumor recurrence
- Development of effective medical therapies is needed



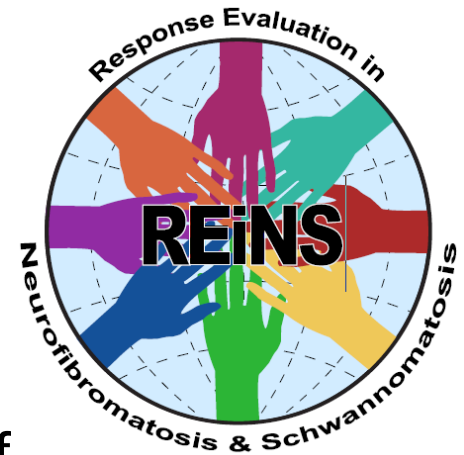
Patient-centered cNF research

- Lack of data concerning how patients assess morbidity related to cNFs and how they view current and potential cNF treatments
- As therapies become available for cNFs, it is critical to understand the patient perspective to guide the design of clinical trials
- Federal funding and regulatory organizations (e.g. FDA, PCORI) are strongly encouraging the involvement of patient representatives to facilitate better informed decisions for patient-centered research



Adult cNF survey

- Created by the Response Evaluation in Neurofibromatosis and Schwannomatosis (REiNS) Cutaneous Neurofibroma Working Group
- Designed to collect basic demographic information, details about the patient's cNFs, views on morbidity related to specific aspects of cNFs, and views regarding current and potential future cNF treatment
- A survey link was distributed via the Children's Tumor Foundation Patient Registry email blast
- Inclusion criteria: NF1, at least 1 cNF, at least 18 years old, and English speaking



JOIN THE
NF REGISTRY

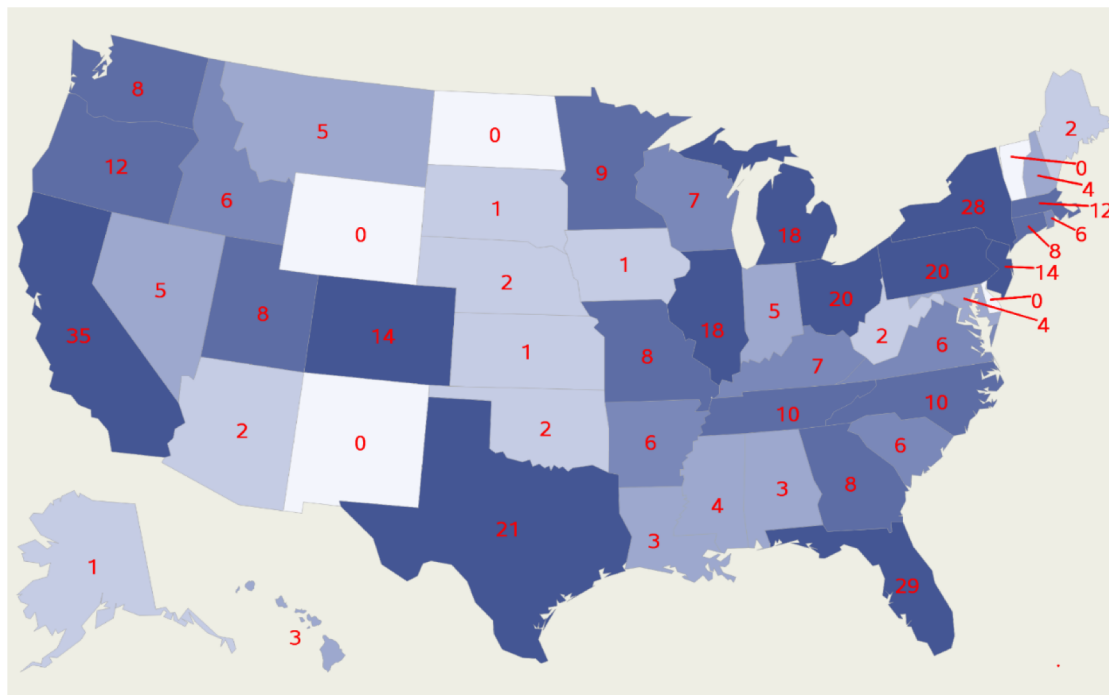
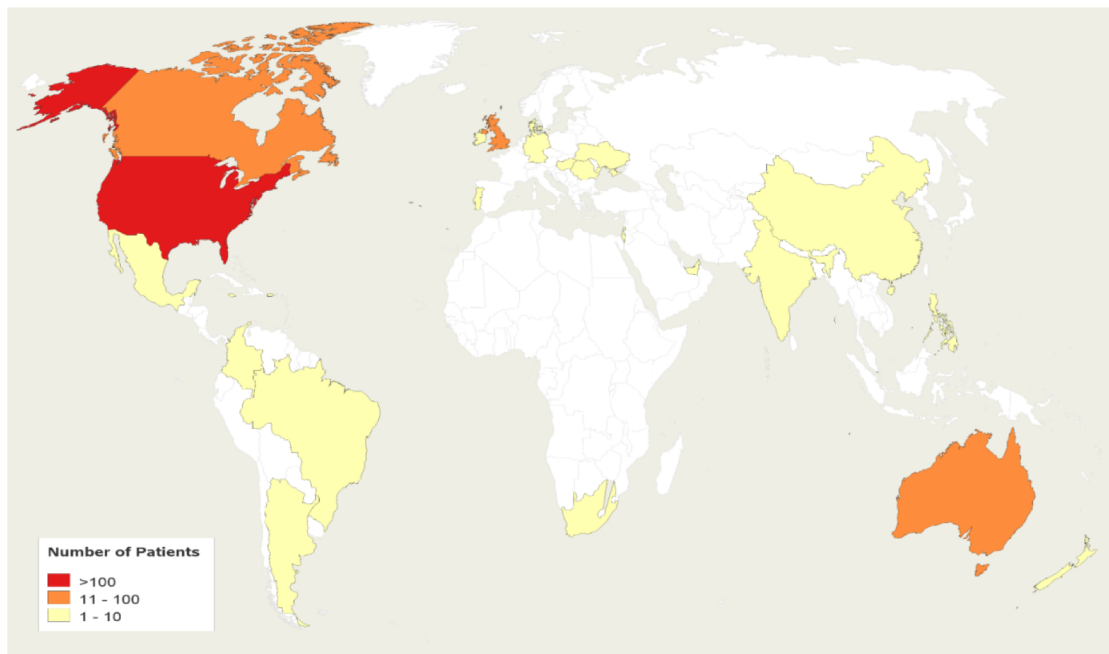
www.nfregistry.org



Characteristics (n=548)	Mean (SD) or N (%)
Age	44.9 (±13.7)
Sex	
Female	385 (67.7%)
Male	171 (30.1%)
Other	1 (0.2%)
Not answered	12 (2.1%)
Race	
American Indian or Alaska Native	7 (1.2%)
Asian	20 (3.5%)
Black of African American	15 (2.6%)
Native Hawaiian or Other Pacific Islander	5 (0.9%)
White	488 (85.8%)
Other	20 (3.5%)
Not answered	14 (2.5%)
Ethnicity	
Hispanic or Latino	36 (6.3%)
Not Hispanic or Latino	413 (72.6%)
Other	91 (16.0%)
Not answered	29 (5.1%)
Education	
Did not complete high school	21 (3.7%)
High school degree or equivalent (e.g. GED)	95 (16.7%)
Some college but no degree	131 (23.0%)
Associate degree (2 year college degree)	83 (14.6%)
Bachelor degree (4 year college degree)	145 (25.5%)
Graduate degree	80 (14.1%)
Not answered	14 (2.5%)
Work outside of home	
Yes	343 (60.3%)
No	213 (37.4%)
Not answered	13 (2.3%)
First person in family with NF	
Yes	368 (64.7%)
No	188 (33.0%)
Not answered	13 (2.3%)

14.6% response rate

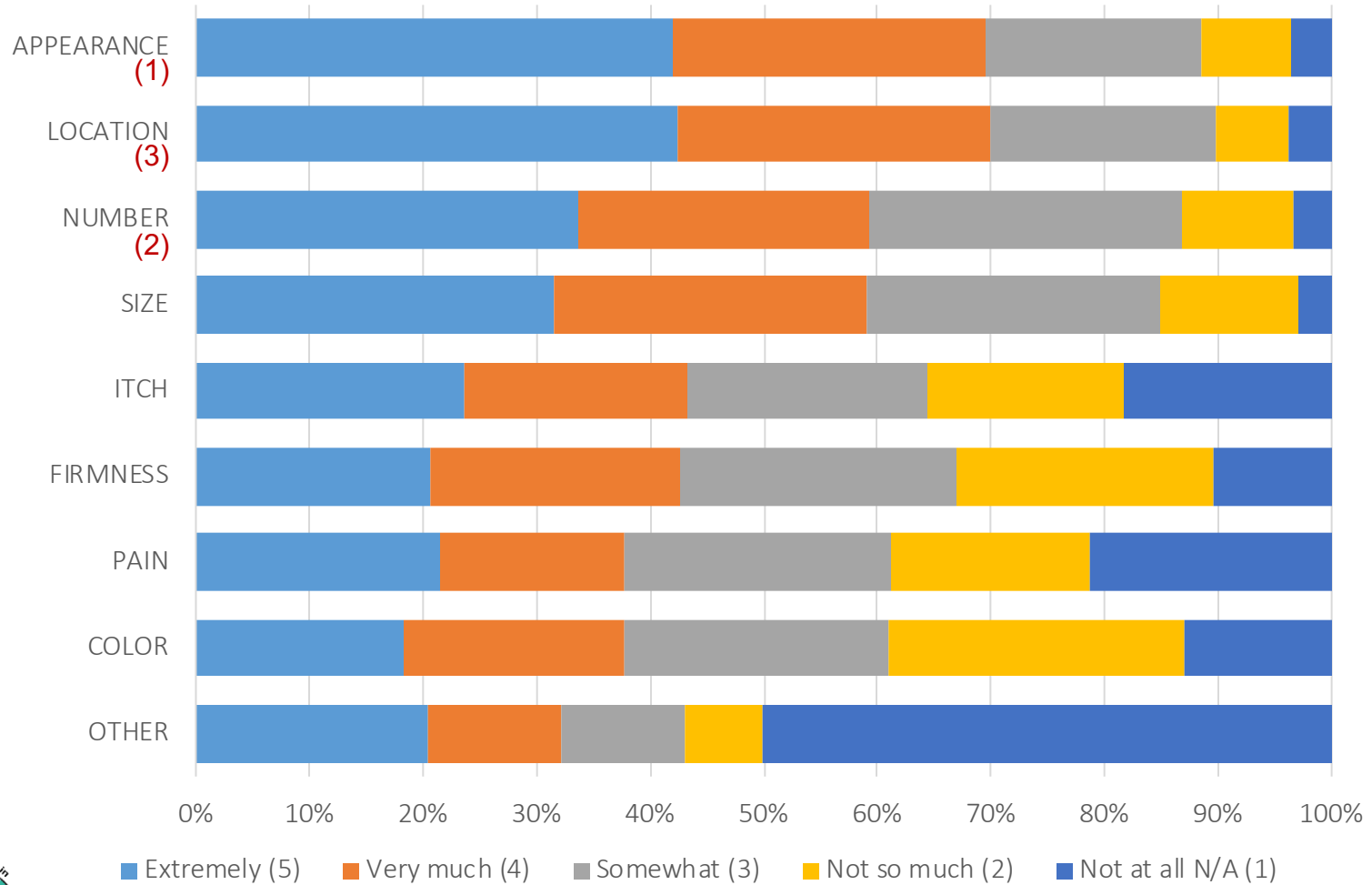




Respondent cNF Characteristics	N (%)
Number of cNFs	
Not Answered	39 (6.9%)
1-19 over entire body	89 (15.6%)
20-99 over entire body	136 (23.9%)
100-500 over entire body	185 (32.5%)
> 500 over entire body	122 (21.1%)
Age at 1st cNF	
Not Answered	41 (7.2%)
Less than 10 years old	147 (25.8%)
10-19 years old	239 (42.0%)
20-29 years old	104 (18.3%)
30-39 years old	30 (5.3%)
40 years or older	8 (1.4%)
Body locations with cNFs	
Scalp	289 (50.8%)
Face	375 (65.9%)
Neck	364 (64.0%)
Trunk (chest, belly, back)	494 (86.8%)
Arms	451 (79.3%)
Hands	334 (58.7%)
Legs	364 (64.0%)
Feet	301 (52.9%)
Genitals	222 (39.0%)
Nipple/Areola	300 (52.7%)
Other	39 (6.9%)
Flat cNF	
Yes	318 (55.9%)
No	86 (15.1%)
I don't know	130 (22.9%)
Not Answered	35 (6.2%)



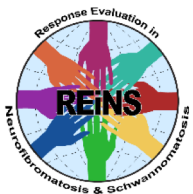
How much does each FEATURE of your **raised** cutaneous neurofibromas bother you (physically, cosmetically, or emotionally)?



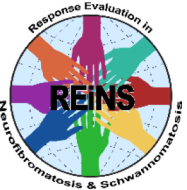
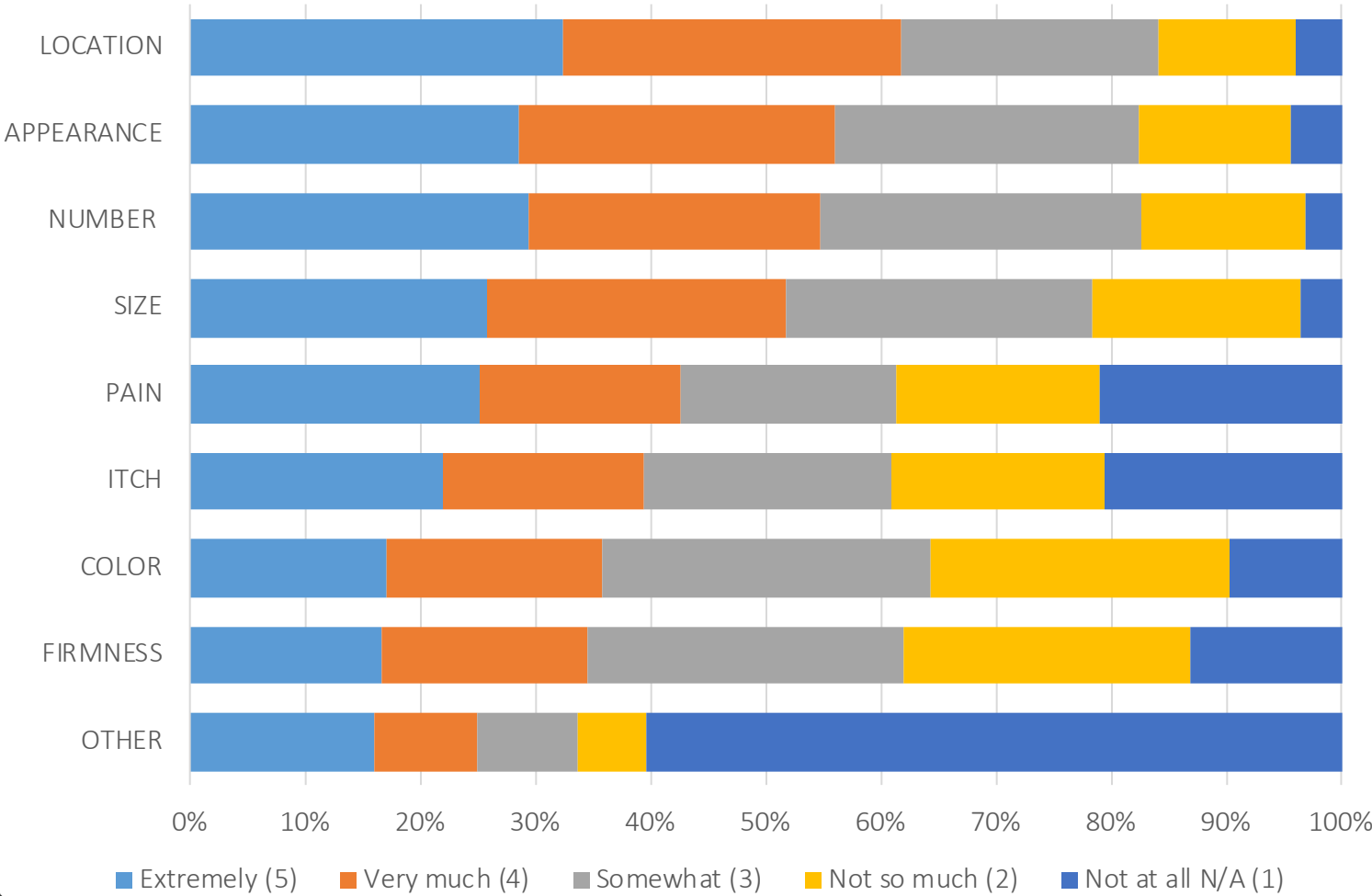
(Rank)

What is it about the cNF feature(s) that bother you?

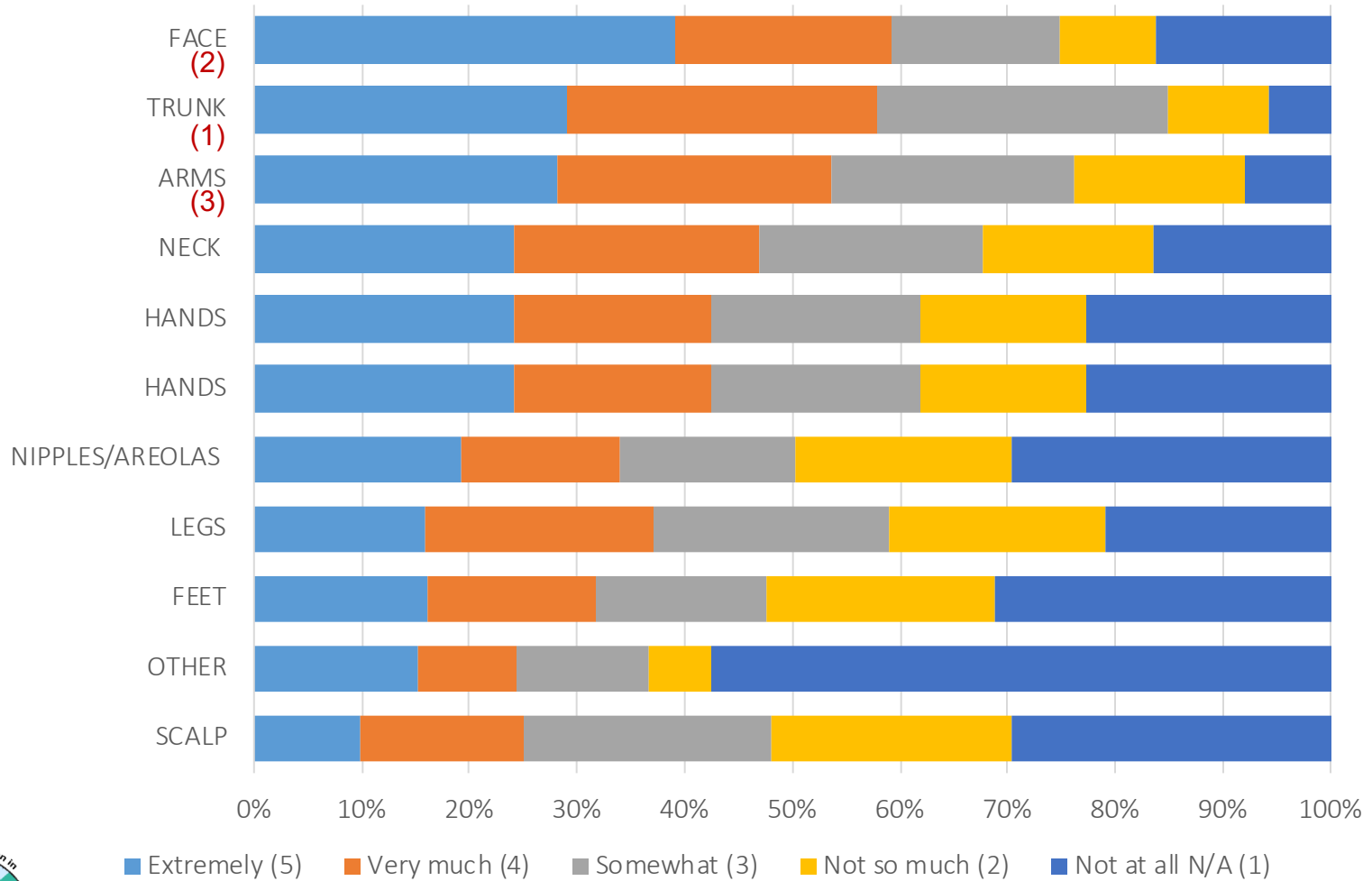
- “While the total number can usually be covered by clothing, this can sometimes be restrictive and uncomfortable, especially in hot weather. The location of some of the cutaneous growths is such that they cause bulges underneath clothing that can be difficult to mask or camouflage.”
- “While pain is always present I don't have to talk about that, but people always see the tumors. I can hide my pain, I can't hide the quantity of tumors.”
- “Each time I look in the mirror I see a person who I don't want to be because of the neurofibromas. Inside I see myself as a butterfly however, my appearance may say other wise. I try to have a conversation with a person, however, I see their eyes staring at my lumps and bumps.”



How much does each FEATURE of your flat cutaneous neurofibromas bother you (physically, cosmetically, or emotionally)?



How much do your cutaneous neurofibromas bother you on each AREA of your body (physically, cosmetically, or emotionally)?



(Rank)

11. When thinking about the raised cutaneous neurofibromas that bother you the most, what is the minimum decrease in cutaneous neurofibroma NUMBER that would be acceptable to you if a new treatment was available? (select one)

a. 0% decrease/No change in number



b. 33% decrease in number



c. 66% decrease in number



d. 100% decrease in number



12. When thinking about the raised cutaneous neurofibromas that bother you the most, what is the minimum decrease in cutaneous neurofibroma SIZE that would be acceptable to you after participating in a treatment trial? (select one)

a. 0% decrease/No change in size



b. 33% decrease in size



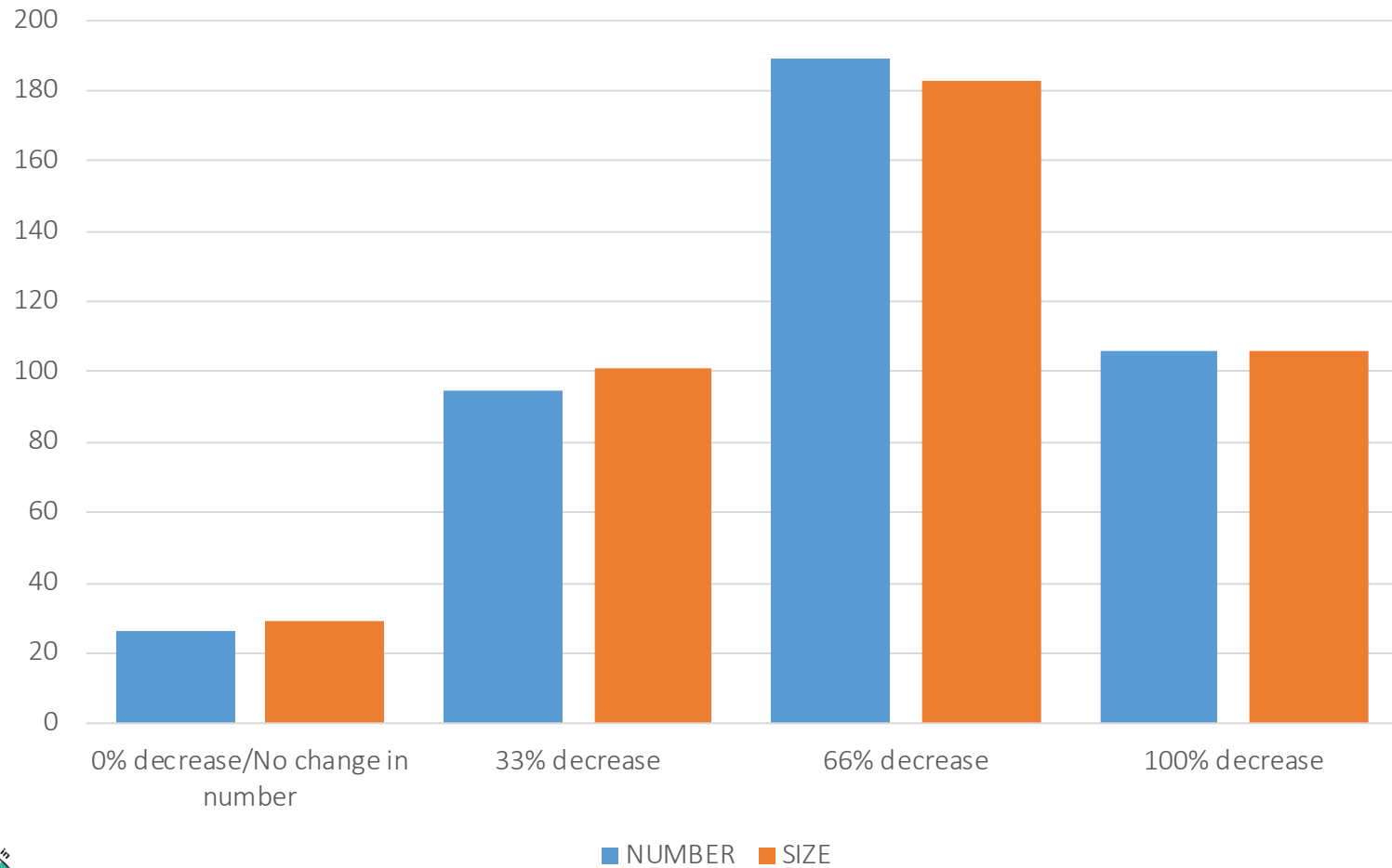
c. 66% decrease in size



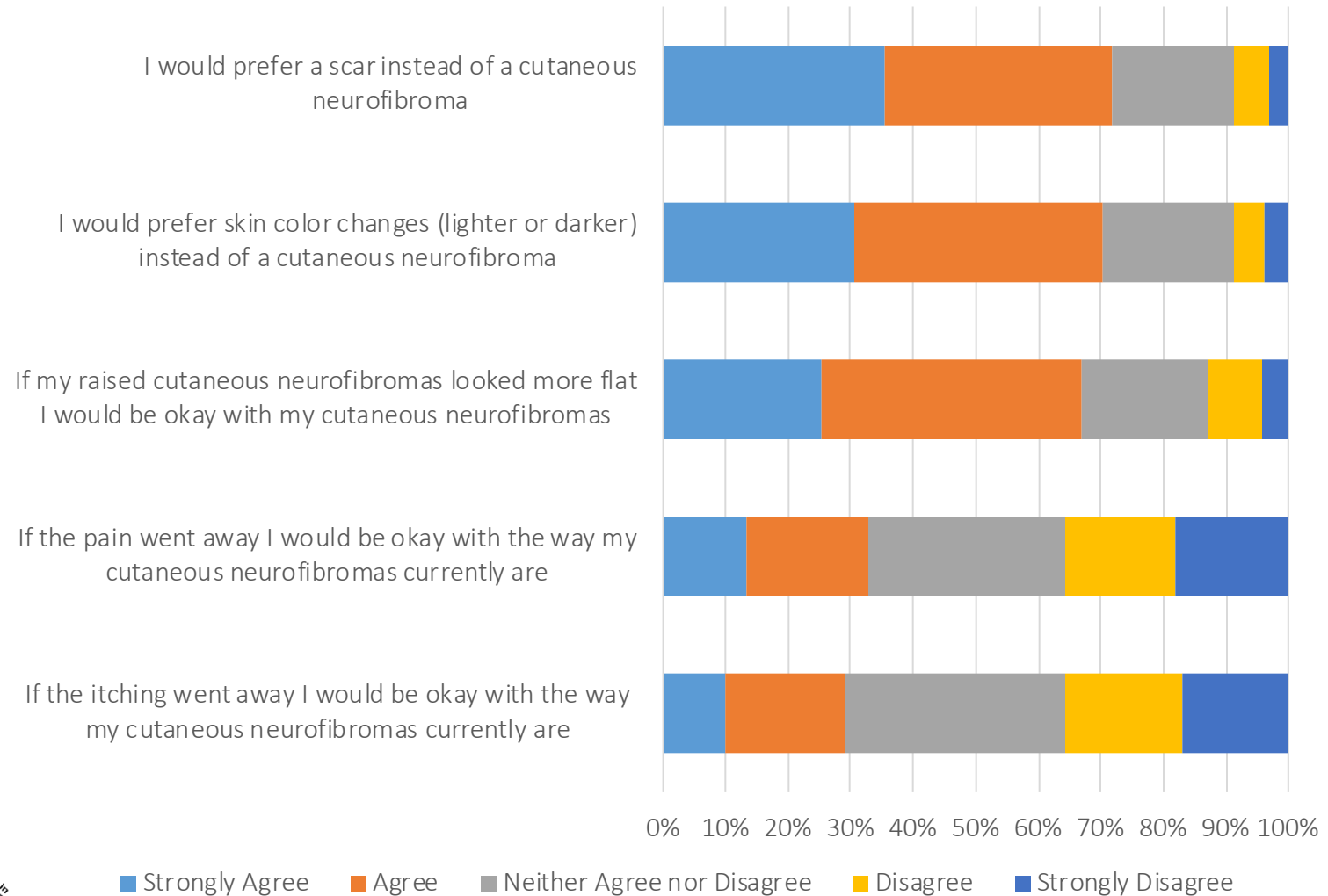
d. 100% decrease in size



When thinking about the raised cutaneous neurofibromas that bother you the most, what is the minimum decrease that would be acceptable to you after participating in a treatment trial?



How do you agree with the following statements?



Adult cNF Survey Conclusions

- Appearance, number, and location are the most bothersome cNF features
- Trunk and face are the most bothersome body areas
- Majority of respondents are okay with treatment that does not result in 100% clearance
- Limitations: not necessarily representative of the general population of individuals with NF1



Future Directions

- Development of an adolescent/caregiver cNF survey
 - How willing are adolescents/caregivers to risk side-effects?
 - Would you have enrolled your child into a cNF prevention study?
 - ???

- Using this information to develop patient and clinician scales (e.g. global assessments/severity scales)



What is an Investigator Global Assessment (IGA)?

An ordinal scale from 0-4

Each grade is defined by a distinct and clinically relevant morphologic description

IGA

The definition of severity grade should not include lesion count – intended to be a qualitative assessment of the condition

Success should be a grade 0 or 1 (clear or almost clear) and at least a 2 grade improvement from baseline



Example of IGAs: psoriasis

Score	Short description	IGAs
0	Clear	Inflammatory response present
1	Almost clear	Pink coloration;
2	Mild	Thinning; pink to white; predominantly fine
3	Moderate	Moderate thickening; clearly defined; clearly defined edges; bright red; severe/coarse scaling for all lesions
4	Severe	



Example of IGAs: eczema



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Example of IGAs: lateral canthus rhytides

Score	Wrinkle s rest	
0	Absent	
1	Minimal	thin 1.5cm radius of nd may be minimally
2	Mild	ending between 1.5- ateral canthus and
3	Moderate	nkles, extending adius of the lateral tely etched
4	Severe	xtending 2.5cm radius and may be deeply



Example of IGAs: epidermal cGVHD

Score	Short
0	Clear
1	Almos
2	Mild
3	Moder
4	Sever



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Other future considerations

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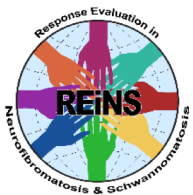
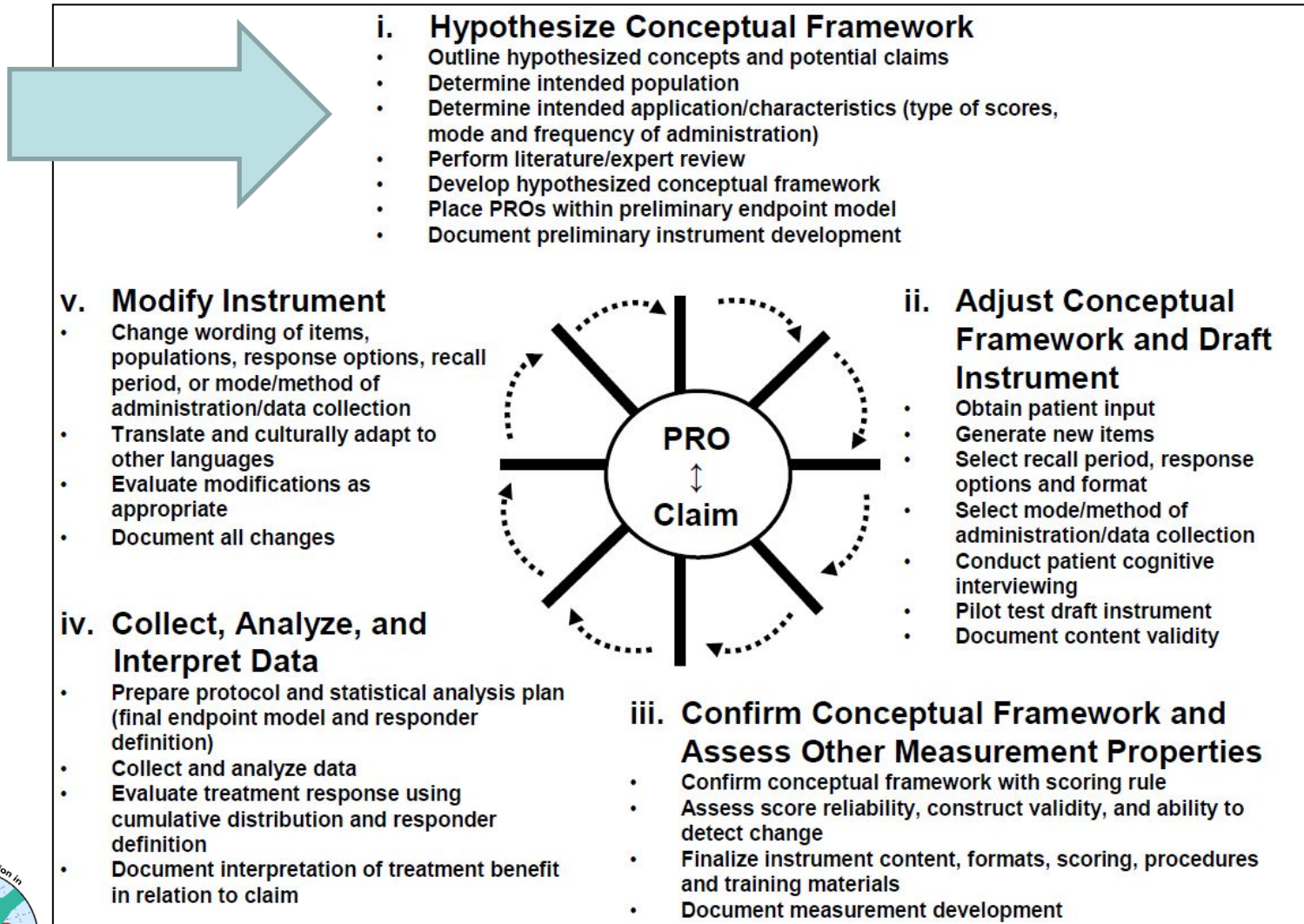


- Hemangioma
- Clinical evaluation completed the target evaluated independently at Week



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Instrument development



“The patient-focused drug development meetings conducted to date have given FDA a deeper appreciation for the expertise that patients and caregivers can bring to the process and the value of incorporating their voice.”

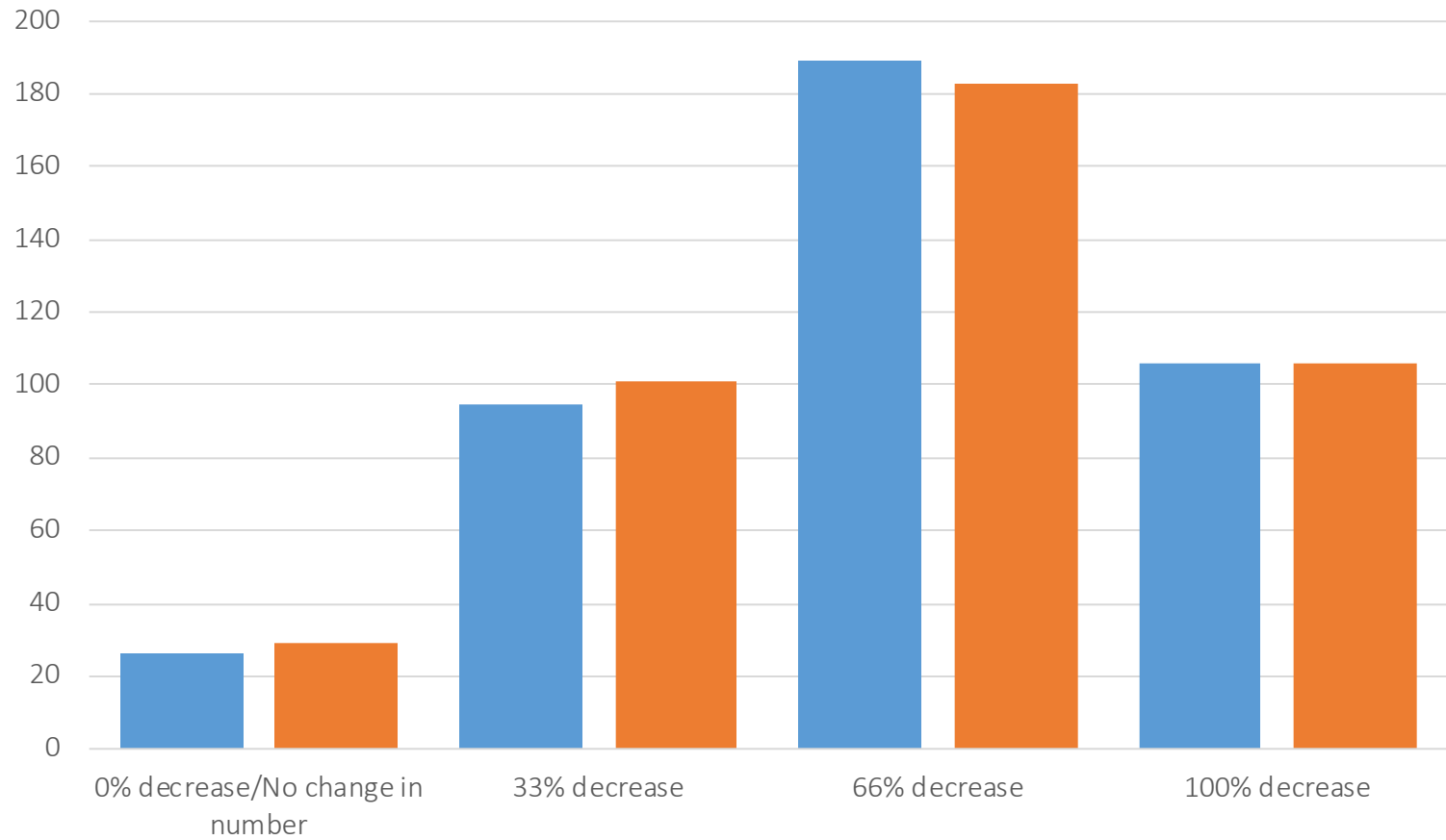


Cutaneous NF IGA

Score	Short descriptor	Detailed descriptor
0	Clear	No residual tumor; scar or pigmentary change may be present
1	Almost clear	
2	Mild	
3	Moderate	
4	Severe	



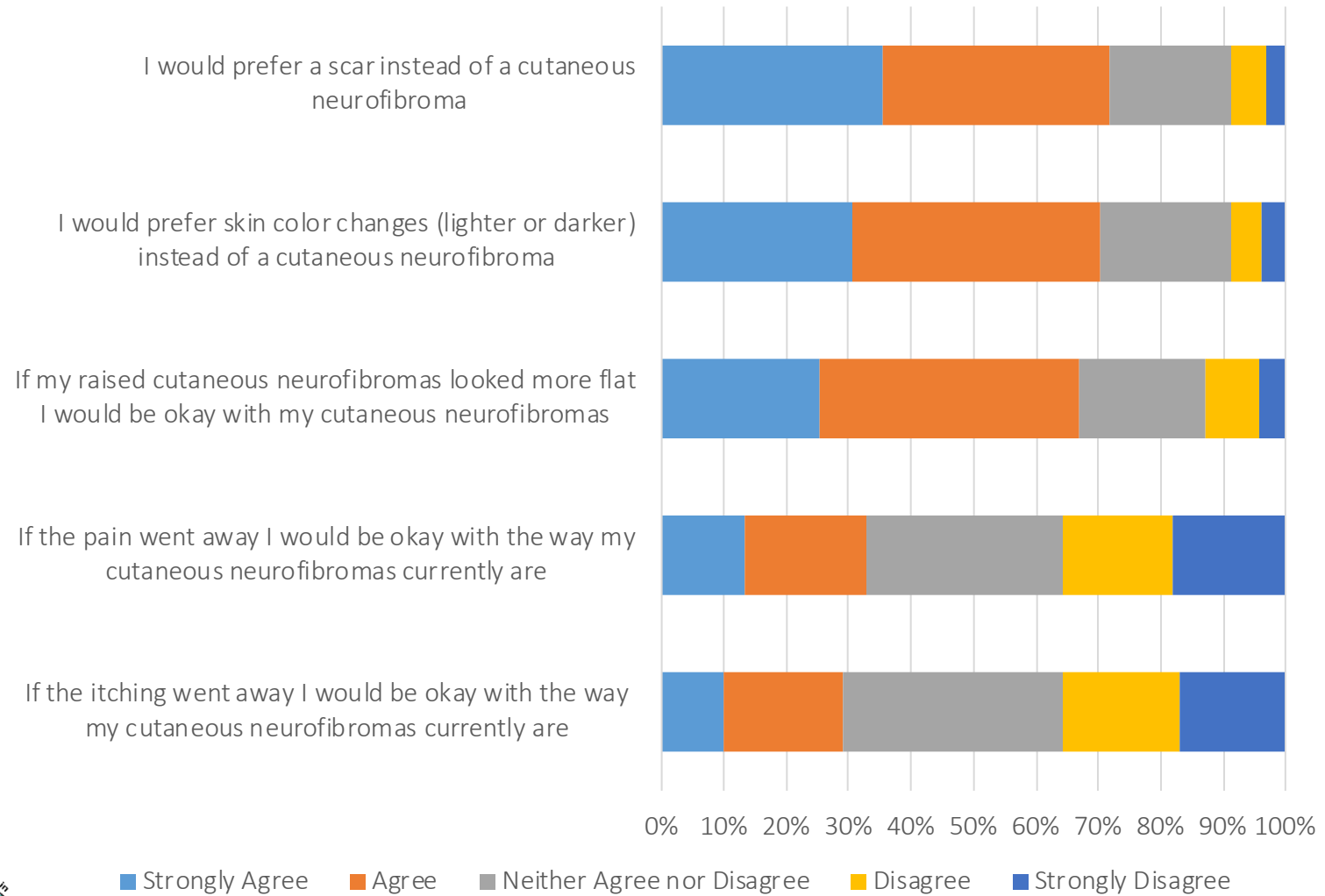
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■ NUMBER ■ SIZE



How do you agree with the following statements?

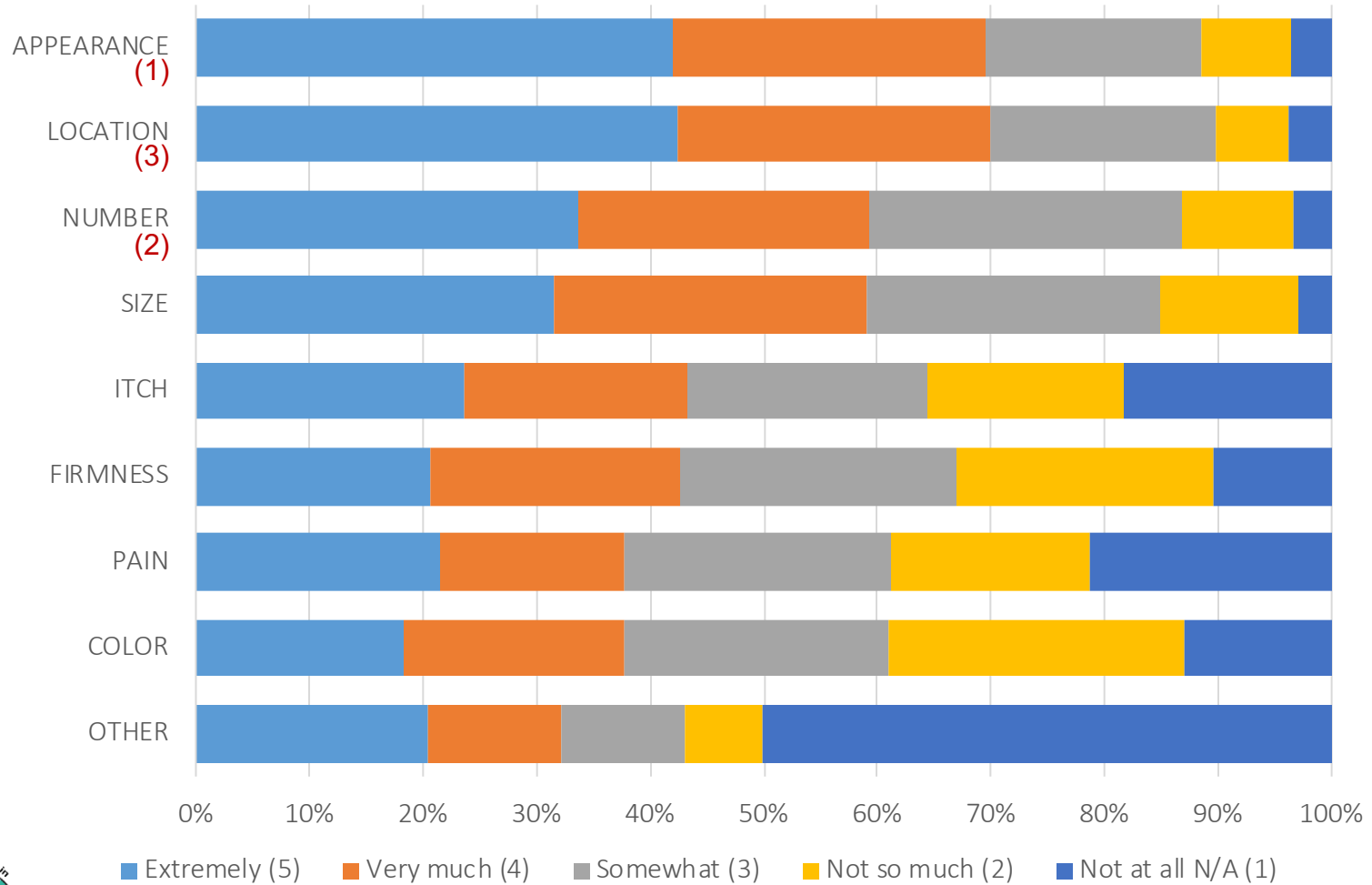


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(Rank)

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2	Mild	
3	Moderate	
4	Severe	



Acknowledgements

- REiNS cNF Working Group
- REiNS Patient Representatives!
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 - Peng Li, PhD
- Funding
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