

Canadian VHL Alliance Patient Survey Results

December 2022 – February 2023

In December 2022 CVHL conducted an online survey of patients and caregivers to assess the challenges VHL patients and caregivers face because of the disease. 123 patients and caregivers participated in the survey as follows:

Patients living with VHL: n=72 (59%)

Someone providing care to a person with VHL disease (either currently or previously): n=51 (41%)

Through this survey CVHLA identified 19 patients who had experience with belzutifan for the treatment of VHL disease.

In our recent survey, we asked patients and caregivers: **On a scale of 1 - 5 please rate how your symptoms associated with VHL impact or limit your day-to-day activities. 1 is "not at all" and 5 is "significant impact".**

Rate how VHL impacts your Ability to work N=112						
1 (not at all)	2	3	4	5 (significant impact)	N/A	Weighted Average (WA)
22pts (19.64%)	21pt (18.75%)	10pts (8.93%)	15pts (13.39%)	35pts (31.25%)	9pts (8%)	3.19

Rate how VHL impacts your impacts your Ability to Travel N=112						
1 (not at all)	2	3	4	5 (significant impact)	N/A	Weighted Average (WA)
36pts (32.14%)	11pts (9.82%)	15pts (13.39%)	17pts (15.18%)	24pts (21.43%)	9pts (8%)	2.83

Rate how VHL impacts your impacts your Ability to Exercise N=112						
1 (not at all)	2	3	4	5 (significant impact)	N/A	Weighted Average (WA)
32pts (30.36%)	19pts (17%)	12pts (10.7%)	9pts (8%)	31pts (27.7%)	9pts (8%)	2.88

Rate how VHL impacts your impacts your Ability to conduct household chores N=112						
1 (not at all)	2	3	4	5 (significant impact)	N/A	Weighted Average (WA)
34pts (30.36%)	19pts (16.96%)	15pts (13.39%)	14pts (12.5%)	21pts (18.75%)	9pts (8%)	2.70

Rate how VHL impacts your Ability to spend time with family & friends N=112						
1 (not at all)	2	3	4	5 (significant impact)	N/A	Weighted Average (WA)
45pts (40.2%)	14pts (12.5%)	17pts (15.2%)	9pts (8%)	17pts (15.2%)	10pts (9%)	2.40

Rate how Hereditary Angioedema impacts your Ability to fulfill family obligations N=112						
1 (not at all)	2	3	4	5 (significant impact)	N/A	Weighted Average (WA)
37pts (33%)	16pts (14.29%)	12pts (10.7%)	16pts (14.3%)	22pts (19.64%)	9pts (8%)	2.71

Patients had an option to add free-form commentary to the question of how symptoms associated with VHL impact or limit day-to-day activities. Here is a sampling of responses:

“As a caregiver to two VHL patients when they are sick and having symptoms it effects our daily life very highly”

“VHL and its manifestations has impacted nearly every aspect of my life to varying degrees.”

“With assistive devices I am able to lead a somewhat normal life, without the assisting devices the impact would be much worse in all categories.”

“Being tired, and feeling rundown would be the biggest symptom that affects my day to day living. It doesn't stop me from doing things, but it does slow things down to the point I need to prioritize how I spend my time during the day.”

We also asked patients and caregivers: **Have you had surgery for the removal of VHL cysts and tumors?**

Of the 112 individuals who answered the question, **85% (n=95) reported having had surgery to removal VHL cysts and tumors.** 6% (n=7) reported having had no surgery, and 9% (n=10) reported that they have “NOT YET” had surgery for the removal of VHL cysts and tumors.

We also asked patients and caregivers: **Where have you had VHL-related cysts and tumours?**

112 individuals provided data for this question. 87 individuals reported multiple tumor sites ranging from 2 to 8 sites. Based on the data collected, the average patient had tumors in 2.8 “sites”. However, many patients reported more than one tumor in one location/site. The sites reported included: *kidney, pancreas, eyes/retina, epididymis, adrenal glands, endolymphatic sac, spine, brain/brainstem/cerebellum, neck, breast, inner ear, choroid arteries, jugular vein, lungs, duodenum, and groin.* Patients reported not only having tumors resected, but in various cases having a whole kidney or lung removed.

We asked: **How many surgeries have you (or the patient you care for) had with respect to the removal of VHL cysts and tumors?**

98 individuals provide data that we were able to use. Unfortunately, numerous patients had so many surgeries that they reported comments like: *“don't know”, “multiple”, “too many to remember”, or “lost count”.*

Of the 98 individuals that provided usable numeric responses, there were a total of 520 surgeries reported, with 18 individuals (18.4%) reporting 10 or more surgeries.

The average number of surgeries reported = 5.3.

Some patients emphasized that the reported number was “so far” indicating that more surgeries were anticipated.

Many patients reported multiple laser eye surgeries in addition to surgeries in other locations on their body, including one patient who had 24 laser eye surgeries.

We also asked: **Please let us know how surgeries have impacted your ability to work or your quality of life, including spending time with loved ones.** 92 patients and caregivers provided commentary. Here is a selection of what they said:

- *Surgeries and threat of surgeries has made everyday a struggle. Some physically as the surgeries have limited my ability to do the things I once enjoyed like running and sports. Some mentally as the fear of surgery or possible surgery has effected every life decision I have ever made.*
- *Surgery on the brain stem tumours removed “affected” 7 loved ones of living daily lives. It took away their ability to swallow, walk, breathe without oxygen, speak clearly.*
- *I was on dialysis for 6 yrs,*
- *Cannot work, speech is slurred cannot eat, can't walk weak*
- *Confined to wheelchair following brain surgery. Needs fulltime personal care. Low quality of life.*
- *The surgeries have impacted my work, quality of life and including spending time with loved ones quite a bit. I have struggled with pain on a daily basis and it is hard to be active.*
- *As a mother they severely impact my ability to care for my son. Weeks of time taken away where I can't care for him. As I heal, I can do more but I'm not the mom I was before. I haven't been able to work in 2 years.*
- *“I'm no longer working”, was said by many.*
- *I am on disability now since 2017. In my case it is progressing more fast*
- *I had to sell my business and retire at 50.*
- *Have to take days off of work and not able to lift more then 10lbs*
- *limited my ability to work and affected my balance.*
- *2 hours is my limit if at all with my pain mgmt and nerve damage.... I'm a recluse most of the time. I was paralyzed on the left after a two part brain surgery So much more but too much to type.*
- *Because the surgery location is a cerebellar tumour, there were many concerns about the side effects and whether I would be able to live again after the surgery..... I had to quit the company repeatedly due to symptoms and treatment. This results in hardship financially and mentally.*
- *I have had spinal cord surgery three times, all in the lumbar spine. With each surgery the scar tissue becomes more extensive.... causes pain and issues with sensation and strength. The doctors say the tumours are like salt and pepper all over the cord, from top to bottom. I'm terrified they will grow and require more surgery. I can't keep doing this ...*
- *I started a new job seven months ago and I hate having to tell them I'm going to need time off for surgery. I wasn't even done my probation when I had to her time off to go for medical appointments and tests and I'm scared I will lose my job over this. Already been passed over for interesting projects because they know I'm going to be taking time off. VHL sucks.*
- *My 1st husband left me as I was sick & I passed this disease to both our children, so he remarried a “healthy” lady & got a “healthy” child who didn't require surgeries every few years. He doesn't like hospitals or sick people. I have now passed this on to both my daughters & 1 grandchild who are now going through all the same issues & surgeries...We VHL Warriors need something other than surgeries & invasive procedures throughout our lives to slow or stop the growth of these tumors. My first surgery was at age 6 & my last one so far was at age 69. Each time I go under anesthesia it is one more step towards anesthetic dementia.*

Caregivers

- My dad and grandfather died at a young age because of vhl... so far I have been blessed with good recoveries but that is bound to change as the years go by.
- I was a caregiver for someone who passed on because of VHL tumors. The patient was confined to a wheelchair because of the loss of use of her legs. All of her personal needs had to be taken care of by a caregiver. She was responsive when spoken too but could not follow along in conversation well enough to make her own decisions about what to say.
- The person I cared for became blind and paralyzed. She had no quality of life
- Took her vision, then her ability to walk, eventually paraplegic.
- The results of surgery impacted the patient and made him bedridden, and took away his ability to swallow, walk. Needed to used oxygen. Inability to speak clearly. Fighting pneumonia frequently. Needed all around care.
- It has impacted my daughter's life. I retired to help her.
- He can't work now due to VHL complications
- The surgeries always impact the time we get to spend together because he's away for surgery and then trying to recover at home. It has impacted the time we spend with him because he is so sick. He is away so much for medical reasons he's missing out on so much family time. And as for work, he is not at all able to work. He has been sitting at home for the last year too sick for work.
- It has forced me to take a lot of time off work over the years to have surgery and recover, which in turn has deterred me from going further in school or taken a more serious role at my current jobs

Conclusion: The impact of VHL goes well beyond its immediate debilitating and life-threatening manifestations. VHL disease also interferes with patients' daily activities, having substantial negative impact on many patients' ability to work, travel, exercise, do household chores, and socialize with family and friends. The impact of multiple surgeries to control VHL cannot be underestimated, and points to the need for non-surgical alternatives for the treatment of VHL.

In our survey we asked: **If you were to consider taking a new therapy for your VHL disease, please rate the following on a scale of 1 - 5. 1 is "not important" and 5 is "extremely important".**

Improvement to your physical condition such as decreasing the size of (or stabilizing) the tumour(s), reducing pain, improving your breathing N=89						
1 (not important)	2	3	4	5 (extremely important)	N/A	Weighted Average (WA)
0pts (0%)	0pts (0%)	4pts (4.5%)	9pts (10.11%)	73pts (82%)	3pts (3.37%)	4.80

Overall Improvement to your quality of life N=89						
1 (not important)	2	3	4	5 (extremely important)	N/A	Weighted Average (WA)
1pt (1.12%)	3pts (3.37%)	6pts (6.74%)	7pts (7.87%)	69pts (77.53%)	3pts (3.37%)	4.63

Chance for long-term stability or reduction of disease. N=112						
1 (not important)	2	3	4	5 (extremely important)	N/A	Weighted Average (WA)
0pts (0%)	0pts (0%)	1pt (1.12%)	10pts (11.24%)	76pts (85.39%)	2pts (2.25%)	4.86

Opportunity to avoid surgery(s) for the removal of VHL related cysts/tumours N=88						
1 (not important)	2	3	4	5 (extremely important)	N/A	Weighted Average (WA)
0pts (0%)	0pts (0%)	2pts (2.27%)	5pts (5.68%)	79pts (89.77%)	2pts (2.27%)	4.9

In our survey we asked: **If you were to consider taking a new therapy for your VHL disease, what severity of side effects would you be willing to tolerate? For example (For example: nausea, fatigue, vomiting, diarrhea, shortness of breath). Rate on a scale of 1 - 5. 1 is "no side effects" and 5 is "significant side effects".**

Opportunity to avoid surgery(s) for the removal of VHL related cysts/tumours N=88						
1 (no side effects)	2	3	4	5 (significant side effects)	N/A	Weighted Average (WA)
2pts (2.22%)	14pts (15.56%)	33pts (36.67%)	23pts (25.56%)	14pts (15.56%)	4pts (4.44%)	3.38

Conclusion: Patients with VHL disease urgently require a treatment that can improve their physical condition by decreasing the size of (or stabilizing) tumours, reduce pain, improve breathing, offer long(er)-term stability or reduction of disease., and, most importantly opportunity offer opportunity to avoid surgery(s) for the removal of VHL related cysts/tumours. Generally speaking, patients are willing to tolerate moderate to severe side effects of a treatment that would offer efficacy in managing VHL disease.

In our survey, 19 individuals reported having had experience with belzutifan to treat VHL disease.

We asked patients who had used belzutifan for VHL disease: **Based on personal experience with belzutifan, how would you rate its effectiveness in controlling your VHL disease? 1 is "not effective" and 5 is "extremely effective".**

Commented [RB1]: I need to figure out why there are 5 "N/A" here. I may have to adjust this to be n=13

How would you rate belzutifan's effectiveness in controlling your VHL disease? N=18						
1 (not effective)	2	3	4	5 (extremely effective)	N/A	Weighted Average (WA)
0pts (0%)	0pts (0%)	7pts (38.9%)	4pts (22.22%)	2pts (15.56%)	5pts (27.78%)	3.62

We also asked: **Based on your personal experience with belzutifan, overall how would you rate its side effects? 1 is "completely intolerable" and 5 is "very tolerable".**

How would you rate belzutifan's side effects? N=18						
1 (completely intolerable)	2	3	4	5 (very tolerable)	N/A	Weighted Average (WA)
0pts (0%)	0pts (0%)	6pts (33.33%)	5pts (27.78%)	5pts (27.78%)	2pts (11.11%)	3.94

We further asked: **If you did experience side effects that were particularly difficult to tolerate, please describe the side effects and your experience.** Here is what was reported:

-Seizures

-Low hemoglobin levels

-Low Haemoglobin levels

-Anemia- very tired

-Nothing have been intolerable so far

-Headaches some dizziness and heart thumping

-Hemoglobin levels drop

-Fatigue, but ____ has no adrenals.

We further asked: What specific side effects have you experienced with belzutifan? Please rate them on a scale of 1 - 5. 1 is "completely intolerable" and 5 is "very tolerable". Based on a review of literature regarding side effects associated with belzutifan, we offered 8 side effects for consideration.

	1 - COMPLETELY INTOLERABLE	2	3	4	5 - VERY TOLERABLE	N/A	TOTAL	WEIGHTED AVERAGE
▼ Fatigue/lack of energy	0.00% 0	11.11% 2	16.67% 3	44.44% 8	16.67% 3	11.11% 2	18	3.75
▼ Nausea	0.00% 0	11.76% 2	5.88% 1	11.76% 2	35.29% 6	35.29% 6	17	4.09
▼ Anemia (low hemoglobin)	0.00% 0	17.65% 3	29.41% 5	17.65% 3	17.65% 3	17.65% 3	17	3.43
▼ Dizziness	0.00% 0	17.65% 3	17.65% 3	23.53% 4	11.76% 2	29.41% 5	17	3.42
▼ Headache	5.88% 1	5.88% 1	23.53% 4	5.88% 1	35.29% 6	23.53% 4	17	3.77
▼ Dyspnea (shortness of breath)	5.88% 1	5.88% 1	11.76% 2	23.53% 4	17.65% 3	35.29% 6	17	3.64
▼ Myalgia (muscle aches and pain)	5.88% 1	11.76% 2	29.41% 5	0.00% 0	35.29% 6	17.65% 3	17	3.57
▼ alanine aminotransferase increased (liver damage)	5.88% 1	0.00% 0	5.88% 1	5.88% 1	41.18% 7	41.18% 7	17	4.30

We asked: On a scale of 1-5 how would you rate your quality of life while taking belzutifan? 1 is "low/seriously impacted", and 5 is "high/normal living".

How would you rate your quality of life while taking belzutifan? N=18						
1 (low/seriously impacted)	2	3	4	5 (high/normal living)	N/A	Weighted Average (WA)
0pts (0%)	0pts (0%)	5pts (27.78%)	9pts (50%)	1pts (5.56%)	3pts (16.67%)	3.73

We further asked: **Is there anything else about belzutifan that you would like us to know and include?**
Here are what respondents said:

-Very hopeful this drug will help all VHL patients

-Hoping for great results for vhl patients.

-We have never had a normal scan until now.

-This medication is life saving in more ways than one, access is vital, and should be granted to those with vascular tumours beyond just RCCs, as it has been proven to be incredibly effective at controlling and reducing the size of CNS tumours of the brain, spine and eyes, and endocrine tumours like pheochromocytomas, and pNETs as well.

We further asked: **How has belzutifan changed, or how is it expected to change, your long-term health and well-being?**

-No more surgeries and long life expectancy.

-Shrinking tumours

-So far it has lessened tumor size and lessened the threat of eyesight loss.

-I am hoping for less surgery's and a longer life then my predecessors

-We hope that it helps to give him more quality of life with less surgeries and hopefully less tumours

-Hoping to not have as many surgeries as I have had in the past. Hoping for longer life expectancy.

-Haven't been on long enough to comment

-If it can prevent more surgeries this is a major improvement to well being as neurosurgeon has said no more surgeries as possible. Progression of tumours will result in full loss of bodily functions.

-Peace.

-Slow or stop the growth of VHL Kidney tumors specifically & hopefully the neuro-endocrine tumors associated with VH in my pancreas, adrenal gland & brain & paragangliomas .

We further asked: **Can you tell us about your story and why access to belzutifan and future therapies are so important to you?**

-Multiple tumors in the brain area, with 1 especially close to where the eyesight could be affected. These tumors have been monitored for years however in the last while, the most troublesome one now had a cyst on it and was becoming more threatening. Low dosage radiation was done for 6 weeks in order to minimize inflammation to the area, with no success. So far belzutifan has lessened the tumor size by 30% per doctor follow ups.

-My dad has had VHL for all of his life he's blind in one eye because of it he has had about 15 different surgeries either on his kidney, his brain or his spine. He has been sick for most of his life because of this. We pray that the belzutifan Will help him to have more healthy days than not. It is so important to us for him to continue to get those belzutifan. His tumours have been growing so much before this, that they have turned to cancer, and given him more sickness, we hope that this will work for him

-I have seen many loved ones suffer from the symptoms that the tumours make and how it effects their quality of life and would love for you to help them as well as future generations fight this decease. There are too many children suffering from it as well and I hope you can find answers for them, thank you!

-To keep my health the way it is currently and for my children and family members in the future We have lost so many family members to vhl it's hard to keep going in life when you see you're own ppl falling over one by one with the same disease it fighting

-Surgeries are very tough on the body and often very tuff side affects

-I was born with vhl , passed on from my father who passed away when I was 2 due to vhl. Hope to find a cure for me and my child that inherited it.

-Kind of our last ditch effort to slow down the bus

-Life saving.

Please approve Belzutifan, so we can stop having so many invasive surgeries & procedures like RFA (radio frequency ablation) & radiation causing scans in our future. We are running out of organs to remove or partially remove & getting too much radiation.

-VHL patients deserve the right to live their lives as far and as healthily as they can, and if there are treatments available that can prolong and improve their lives and reduce their pain and tumours, they should have a right to access those treatments. To deny them is inhumane and cruel. Access should be easily managed through an oncology team and factors like a patient's location, gender, race, social status, insurance or income should have no impact on their ability to access life saving treatments like Belzutifan.

We further asked: What specific side effects have you experienced with belzutifan? Please rate them on a scale of 1 - 5. 1 is "completely intolerable" and 5 is "very tolerable". Based on a review of literature regarding side effects associated with belzutifan, we offered 8 side effects for consideration.

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