

Patient Input Template for CADTH CDR and pCODR Programs

Name of the Drug and Indication	Ixekizumab for ankylosing spondylitis
Name of the Patient Group	Canadian Arthritis Patient Alliance (CAPA) & the Arthritis Society
Author of the Submission	Sammy Feilchenfeld
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Email	
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1. About Your Patient Group

The Canadian Arthritis Patient Alliance (CAPA) is a grass-roots, patient-driven, independent, national education and advocacy organization with members and supporters across Canada. CAPA creates links between Canadians with arthritis to assist them in becoming advocates and to improve their quality of life. CAPA believes the first expert on arthritis is the person who lives with arthritis, and is an organization for patients run by patients (who are all volunteers). As a virtual organization we have no physical office and communicate with our community primarily through electronic methods, such as our [website](#), quarterly newsletter, e-mail, and social media. CAPA welcomes all Canadians with arthritis, and those who support CAPA's goals, to become members.

The Arthritis Society has been setting lives in motion for over 70 years. Dedicated to a vision of living in a world where people are free from the devastating affects that arthritis has on the lives of Canadians, the Society is Canada's principal health charity providing education, programs and support to 6 million Canadians living with arthritis. Since its founding in 1948, The Society has been the largest non-government funder of arthritis research in Canada, investing more than \$200 million in projects that have led to breakthroughs in the diagnosis, treatment and care of people with arthritis. The Arthritis Society is accredited under Imagine Canada's Standards Program. The website www.arthritis.ca provides more detailed information.

2. Information Gathering

We developed a survey to hear directly from people living with ankylosing spondylitis (AS) about their experiences with AS and any experiences taking ixekizumab. CAPA and the Arthritis Society collaboratively developed the survey and the design was informed by the lived experiences of the CAPA Board Members who all live with various forms of arthritis. The survey was shared via e-mails and social media (CAPA and Arthritis Society Facebook and Twitter accounts) through our respective Canadian networks and communities. The survey was open from August 9 until September 9, 2019.

In addition, a survey was developed by the Canadian Spondylitis Association (CSA), which was distributed through social media channels and the CSA website between August 8, 2019 and September 15, 2019. The results of the survey conducted by CSA were shared with us for the purposes of this submission, and our results were shared with CSA as well.

An Eli Lilly Canada contact provided us with names of the Canadian rheumatologist trialists who had patients enrolled in the AS ixekizumab clinical trial. CAPA, the Arthritis Society and CSA reached out to these rheumatologists via email and asked them to pass along a letter to clinical trial participants that explained CADTH, the Common Drug Review process, and why their input would be of value. The letter provided a link to the CAPA and Arthritis Society survey as well as contact information for Sammy Feilchenfeld, in case they wanted to be in touch via email and/or phone.

For our survey, ten responses were received, of which no individuals had experience taking ixekizumab. The survey collected demographic data, however not all respondents completed this section. Those who completed demographic data (n=4) represented an age range of 31-49. All respondents indicated that their AS was moderate in terms of its severity.

The CSA survey received 62 responses, of which 52 were from Canadian respondents. Unfortunately, no respondents had experience taking ixekizumab. All survey responses used in this submission are from the Arthritis Society/CAPA survey, unless specifically noted as a response from the CSA survey.

3. Disease Experience

Ankylosing spondylitis (AS) is a type of inflammatory arthritis that affects the spine and the sacroiliac joints that attach the pelvis to the base of the spine. With AS inflammation, the immune system attacks the ligaments and tendons attached to bone in the joints of the spine. The bone erodes at these sites and the body tries to repair itself by forming new bone. The bones of the spine begin to fuse, or grow together, causing the spine to become stiff, inflexible and painful. Even though new bone forms, the original bone in the spine can become thin, increasing the risk of spinal fractures. In addition to the spine, AS can cause pain and stiffness in peripheral joints such as the hips and shoulders. As many as 1% of the Canadian adult population lives with AS.

Symptoms that respondents indicated as having the greatest impact on their day-to-day life included joint pain, mobility, fatigue and sleep issues. Symptoms also had an impact on daily activity. Respondents had the following comments on work, life and travelling:

- *“Work can be challenging because I'm a waitress who does lots of walking and lifting, but I tend to manage. Housework and gardening is really hard on my body, so I hired a housekeeper to help me out. I cannot play sports or do vigorous activities.”*
- *“Travelling is very hard. Concentrating at work also is a struggle.”*
- *“Daily mobility issues, lots of appointments that make me miss work”*
- *“I do work but my other activities are limited. I walk for exercise but can't do that every day.”*
- *“When medication doesn't work well it's difficult to go to work and even get dressed and sleep is difficult.”*

- *“SI [sacroiliac] joint pain and costochondritis are my main issues. Severe flare ups have lessened but when they do occur, I get stuck in painful positions that I can't get out of, have been carried to bed because I can't walk, legs give out and it's painful to breathe. Day-to-day I do quite well. With a flare up and a busy job as an ICU RN [Intensive Care Unit Registered Nurse]... it gets really painful. But the more I move the better it is.”*
- *“Fighting to get through every day with some level of normalcy, limited to what I can get achieved, makes work harder. Family life has changed considerably.” – CSA Survey*

AS impacts lives in many ways: completing daily tasks that many well individuals take for granted may become difficult or too exhausting to complete; participating in leisure activities can be difficult; caring for or spending time with family members such as children and loved ones, such as spouses / partners also becomes difficult.

- *“Fatigue is a big issue. It's difficult to work full time and have a busy household with children.”*
- *“I am not able to clean, cook, do laundry Everything hurts with severe hand and foot pain. I cannot play with kids and work is affected. Cannot sleep well. Very bad fatigue.” – CSA Survey*
- *“In constant pain which affects my mood and physical abilities. Can't hold a job due to flare ups. Have trouble keeping friends due to difficulty of leaving my home or participating. Basic needs like cleaning and self care are difficult and often aggravate joints to more flare ups.” – CSA Survey*
- *“I am a university student, heading into my senior year. I am unable to do full time classes due to pain and fatigue, so I take a reduced course load. I have not been able to work much over the past 3 years either. Standing in one spot (example in a grocery store line or at a bus stop) is much more difficult for me than walking. I have difficulties with getting things off of low shelves and picking things up from the floor.” – CSA Survey*
- *“Chronic daily pain and fatigue. I fight through it. Can't clean around my house as I did before. My children have to do this. I can't garden and take care of the lawn without extreme pain. Basically after any sort of activity, I need a long period of rest. Have to stop and stretch regularly throughout the day to relieve pain and keep muscles from being so tight. Intercourse is difficult and requires a recuperation period after. At the end of my work day I spent an hour in a hot bath with Epsom salts. If I don't, it's a rough night. Had to give up playing floor hockey, soccer and skiing. Currently play ice hockey once per week. The gliding seems easier on my body than the impact of running or hitting bumps on a hill. It's a low-key, women's pickup league, so no hitting or rough play. I'm tired ALL THE DAMN TIME!!” – CSA Survey*
- *“Well, I lost my career, my home, my family, and my marriage fell apart. At this point, I have no family to impact with my daily routine, and I think it's best to keep it that way? I can barely manage to keep in regular contact with my brothers through Skype.” – CSA Survey*

4. Experiences With Currently Available Treatments

Current medications for AS are designed to control disease, slow its progression and help manage pain, given that there is currently no cure for AS. Many treatments simply help people get through the day. Treatments used to manage AS include non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroids, and disease-modifying anti-rheumatic drugs (DMARDs), such as methotrexate, sulfasalazine, and various biologic medications (protein-based medicines). The following provides a general description of the treatments used and their side effects:

- NSAIDs [Non-steroidal Anti-Inflammatory Drugs] are used to treat inflammation, which in turn often also affects (i.e. lessens) pain. The NSAIDs may cause many side effects, from stomach upset to changes in kidney function.
- Corticosteroids are commonly used to control/reduce inflammation and while effective, can produce side effects when taken for longer durations and at higher doses. Corticosteroids can cause short-term effects such as weight gain, acne, excess facial hair, mood swings, high blood pressure, high blood sugar, increased infection, stomach ulcers, hyperactivity, and increase in appetite. Long-term effects include osteoporosis, glaucoma and cataracts, osteonecrosis, skin changes, heart disease, and stroke.
- DMARDs such as methotrexate and biologic medications may include other side effects. Methotrexate often causes nausea, hair loss, and may cause liver damage. Its nausea effects are sometimes mitigated by also taking folic acid, splitting doses over the course of a few hours, and/or taking subcutaneously rather than orally. Biologic medications may have side effects such as injection reaction irritation, increase risk of upper respiratory infections, pneumonia, urinary tract infections and skin infections.

Treatment for AS is based on trial and error for each individual. Patients reported that they had tried a number of treatments for AS. Some might work well right away, or take time to improve outcomes. Others may work for some time before the individual needs to change treatment to see changes again.

Often, currently available treatments can be difficult to tolerate and manage. Nearly everyone on the CAPA/Arthritis Society survey noted that they encountered side effects from currently available treatments. However, around two thirds of respondents on the CSA survey stated that they did not have adverse effects from current treatments that are more difficult to tolerate than other treatments that they have tried. Respondents to both surveys shared their experiences with side effects:

- *“NSAID drugs have not made much difference and carry the risk of liver damage. They are not effective. Cosentyx is effective but a monthly dose is not enough to stay pain free. It only lasts 2 to 3 weeks before the pain returns full force. It is also cost prohibitive without a drug plan. Fatigue is improved with this drug, but again the results do not last.”*
- *“I have tried remicade, which was effective but had bad side effects such as increased blood pressure, anxiety... Tried Naproxen, which hurt my GI track. Tried Sulfasalazine, but I'm allergic. Tried percocet, but gave me headaches. Tried Toradol, which seems to work well. I take it only when really needed so as not to irritate my GI track.”*
- *“I have used simponi. It worked well for 8 years then lost effectiveness. Recently switched to humira and seems to be working well. With both treatments I have noticed some skin issues. From being dry to getting small sores that hurt and swell”*
- *“Initially was slated on Indocin. Stopped soon after as it caused extreme weakness, headaches, and did not help my pain. Then prescribed Celebrex. Despite dosage changes, it also did not help my pain. With my most severe flare up after the birth of my daughter, a tapered dose of*

prednisone worked within hours of starting. Usually I take Advil and Tylenol, use ice and heat, walk and try to exercise when having pain.”

- *“My doctors tell me my condition is "stabilized". I describe my life as rather miserable. The truth is likely somewhere between the two?” – CSA Survey*

Patients may also pursue non-pharmacological approaches to manage AS symptoms in addition to medication, such as physiotherapy, occupational therapy, massage therapy, counselling, or chiropractic therapy. These approaches can often help to address the symptoms of the disease, such as pain and fatigue. However, there are significant unmet patient needs in terms of accessing non-pharmacological treatments, often because they are not reimbursed through provincial health care systems, the treatment options are simply not offered, or there are lengthy waits.

- *“I have done Chiro [chiropractics], physiotherapy, nerve blocks, lidocaine infusions and taken pain meds such as Atasol 30 and continue on biologic meds”*
- *“Medicinal Marijuana has proven to be quite wonderful. As I tell people, "weed doesn't do much about the pain, but at least I don't mind it quite so much". The psychological effects of living with chronic pain are probably the most debilitating, in my mind. Marijuana definitely helps with that.” – CSA Survey*
- *“Cannabis is by far the most effective acute treatment. Pain killers are 100% ineffective and do not allow areas of my back to relax. Cannabis combined with yoga is very very effective at improving mobility - the cannabis reduces pain and allows areas which tend to tighten up (back and hips) to relax, thereby allowing for effective stretching and strengthening.” – CSA Survey*

5. Improved Outcomes

People living with AS reported that current treatments are difficult to tolerate because of side effects. A variety of side effects are difficult to manage such as those described above. Some of these side effects require treatment with other medications, such as anti-nausea medications. Minimizing these side effects are important outcomes that should be considered when evaluating new therapies. Respondents also noted the impact these treatments had on their daily lives:

- *“NSAIDs have side effects for digestion, daily impact as you can't venture far from a bathroom. Cosentyx has limited side effects such as sensitive skin for 24 hours after injection.”*
- *“The side effects of treatment were the main reason that I do not use daily treatment.”*

Even with currently available treatments for AS, patients' outcomes can vary significantly. Some medications are effective for some people, while not effective for others. Some treatments will effectively manage AS for a short period of time before a person's immune system adapts to a drug's presence (i.e. becomes non-responsive to it) and they will have to switch to another medication. In some cases, people living with AS may not respond to any of the currently available medications. As a result, patients need a number of medication options to manage their AS throughout their lives. Unfortunately, so little is

understood about AS that there is currently no way to predict who will best respond to which medications and/or the best dose of those medications for individuals.

There are outcomes that are important to people living with AS, and these include:

- reduction in pain and fatigue
 - reduction in disease progression
 - reduction in stiffness and swelling
 - increased mobility
 - ability to work and be productive at work
 - ability to carry out activities of daily living
 - decrease in medication side effects.
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- *“I would like pain-free days and the ability to exercise more, less doctor appointments for nerve blocks”*
 - *“I would hope for a great reduction in pain and stiffness with minimal side effects.”*
 - *“Not willing to experience serious side effects. I would need to be pain-free with a return of physical strength and significantly reduced fatigue to consider it effective. This would allow me to complete normal daily tasks without hinderance.”*
 - *“Honestly, the goal needs to be to stop the disease progression and not decrease my immune system since I work in an ICU as an RN. I cannot have this part of my life impacted to a dangerous level not having an immune system to fight off various illnesses I am subjected to.”*

6. Experience With Drug Under Review

While none of the survey respondents had indicated using ixekizumab for their ankylosing spondylitis, the survey responses addressed in section 5 illustrate the desire for a medication with improved outcomes and potentially less side effects.

7. Companion Diagnostic Test

Not applicable

8. Anything Else?

No further comments at this time.