



September 2014 (updated May 2015)

# ELDER CARE

## A Resource for Interprofessional Providers

### Biologic Agents for Inflammatory Bowel Disease in Older Adults

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Between 10-30% of patients with inflammatory bowel disease (IBD), comprised of Crohn's disease (CD) and ulcerative colitis (UC), are at least 60 years old, and 10-15% of patients with IBD are first diagnosed in older age groups. The rate of IBD is growing worldwide with an increasing number of older adults affected by IBD.

IBD that develops in older adults has unique characteristics. While younger patients with IBD tend to have progression of their disease over time, IBD in older adults is fairly stable, with inflammation that does not progress as it does in younger individuals. This results in less aggressive disease, fewer strictures, and fewer bowel perforations.

Despite this, older patients make up a disproportionate number of IBD-related hospitalizations and have the same rate of surgery as their younger counterparts. The reasons for this are not clear, but it may be due to clinicians being hesitant to use more aggressive immunosuppression in older adults. Or, perhaps many older adults have decreased functional status and end up in the hospital when unable to care for themselves with symptoms that a younger and more functional individual could manage as an outpatient. It is always important to establish goals of care to ensure that the treatment plan aligns with patient and family preferences and values.

#### **Steroid Therapy - Overused in Older Adults?**

Use of long-term corticosteroid therapy, typically used for moderate-to-severe disease, is disproportionately high as a treatment for IBD in older adults, despite its known adverse effects. Adverse effects of particular importance to older adults include: osteoporosis, impaired glucose tolerance, mental status changes, cataracts, and an increased risk of infections.

The disproportionately high rate of steroid use in older adults suggests that other treatments, particularly the new so-called biologics (Table), which can induce and maintain

remission in IBD, are likely underused in older adults.

The biologics discussed in this Elder Care refer to immunosuppressive drugs that inhibit the action of tumor necrosis factor (TNF), a cytokine that induces inflammation. They are used to manage moderate-to-severe CD and UC and also a variety of rheumatologic disorders. They are an alternative to steroids that have the potential to limit steroid use while reducing intestinal inflammation. The results may be a lower rate of disease complications and improved quality of life.

#### **Effectiveness in Older Adults**

When used in younger patients with IBD, biologics have been shown to increase steroid-free remission periods, decrease hospitalizations, delay or prevent surgery, and improve quality of life. However, only a few small observational studies have specifically evaluated their use in older adults. One study involving 95 patients over 65 years old found that biologics induced remission at similar rates in both younger and older individuals. Another study found similar rates of improvement, based on endoscopic examination, in older vs younger individuals. But, a third study found that patients over 60 years had a lower response rate than younger individuals (61% vs 83%), and older adults were 3 times more likely to stop therapy.

#### **Safety in Older Adults**

**Infections** Information on the safety of biologics in older adults is drawn partly from experience treating patients for IBD, but more from patients treated for rheumatologic disorders. These studies show an increased risk of infection for elders when compared to younger individuals.

While the risk of infection may not be higher, infections that occur in older adults may be more serious, such as sepsis. One study found that the rates of severe infection are four-fold higher (12% vs. 3%) and infection-related deaths are increased by a factor of ten (11% vs. 1%).

#### **TIPS FOR MANAGEMENT OF INFLAMMATORY BOWEL DISEASE (IBD) IN OLDER ADULTS**

- Although many clinicians think of IBD as a condition that occurs in younger adults, don't forget that 10-15% of patients newly diagnosed with IBD are over 60 years of age.
- While steroids are widely used for acute disease control in IBD, their side effects from long-term can cause problems, especially for older adults. Consider biologics as an alternative therapy.
- Test patients for latent tuberculosis before starting therapy with biologics.
- When following patients who are taking biologics for IBD, be alert for adverse effects including infections and psoriasis-like skin disorders. There is also concern that biologics might increase the risk of cancer, particularly melanoma.

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Other studies have shown a 5-10% rate of infections requiring hospitalization. Of additional concern, it is important to note that the risk of infection is even higher among patients receiving steroids as a treatment for IBD.

The infection risk includes activation of latent tuberculosis, hepatitis B, and certain endemic fungal infection. Patients being considered for therapy with biologic agents should be tested for these conditions prior to treatment.

**Malignancy** There has been concern that because of their immunosuppressive effects, biologics might increase the risk of cancer. However, studies have only shown a slight association with an increased cancer risk – and only with melanoma. (Patients taking biologics should use sunscreen and undergo interval dermatological exams.)

Furthermore, a large prospective study recently completed in North America found no increased risk of cancer in patients exposed to biologics versus other immunosuppressants for IBD, such as azathioprine and 6-mercaptopurine. In addition, studies in the rheumatology literature indicate that patients with a history of malignancy while on biologics do not have an increased risk of cancer when biologics are restarted. Of note, all of these studies examined only short-term outcomes, so the long-term cancer risk remains unknown.

**Other adverse events** Use of biologics has been associated with skin disorders (psoriasis and psoriasis-like rash) and injection site reactions. Biologics can also worsen heart failure and they are contraindicated in moderate-to-severe heart failure (New York Heart Association class 3 or 4).

Biologics can cause hypersensitivity reactions especially when discontinued and then restarted. Rarely, biologics have been associated with demyelinating disease.

Information on the aforementioned adverse effects is drawn primarily from studies involving younger individuals. There are no specific data regarding these adverse events in older adults.

## Final Comment

The burden of IBD in older adults is significant and patients often require immunosuppression with biologics to manage their disease. Limited studies suggest that these drugs are effective for treating IBD in older adults and they allow less use of steroids, but at the cost of a possible increased risk of infection and melanoma. Data on effectiveness and safety drawn specifically from studies in older adults are limited, however, and more studies are necessary to better define the role of biologics for treating IBD in older adults.

## Anti-Tumor Necrosis Factor (Biologic) Agents for Treating Crohn's Disease (CD) and Ulcerative Colitis (UC)

Biologic Agent	Approved for CD	Approved For UC	Contraindications (Common to All Biologics)	Adverse Events (Common to All Biologics)
Adalimumab (Humira) * †	x	x	<ul style="list-style-type: none"> <li>Heart failure (New York Heart Association Class III/IV)</li> <li>No live-virus vaccines should be given while taking biologics</li> </ul>	<ul style="list-style-type: none"> <li>Cytopenias</li> <li>Demyelinating disease</li> <li>Hypersensitivity</li> <li>Increased rate of infection</li> <li>Increased rate of melanoma</li> <li>Injection site reaction</li> <li>Psoriasis</li> </ul>
Certolizumab pegol (Cimzia) *	x			
Golimumab (Simponi) *		x		
Infliximab (Remicade) ** †	x	x		

\*Given subcutaneously at home

\*\*Given intravenously by health care professional

†Most widely used/studied in older adults

## References and Resources

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Supported by: Donald W. Reynolds Foundation, Arizona Geriatric Education Center and Arizona Center on Aging

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UB4HP19047, Arizona Geriatric Education Center. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.