

# Increase in HLA-B27 Testing Despite Knowledge Translation to Doctors

## Choosing Wisely Canada Recommendation

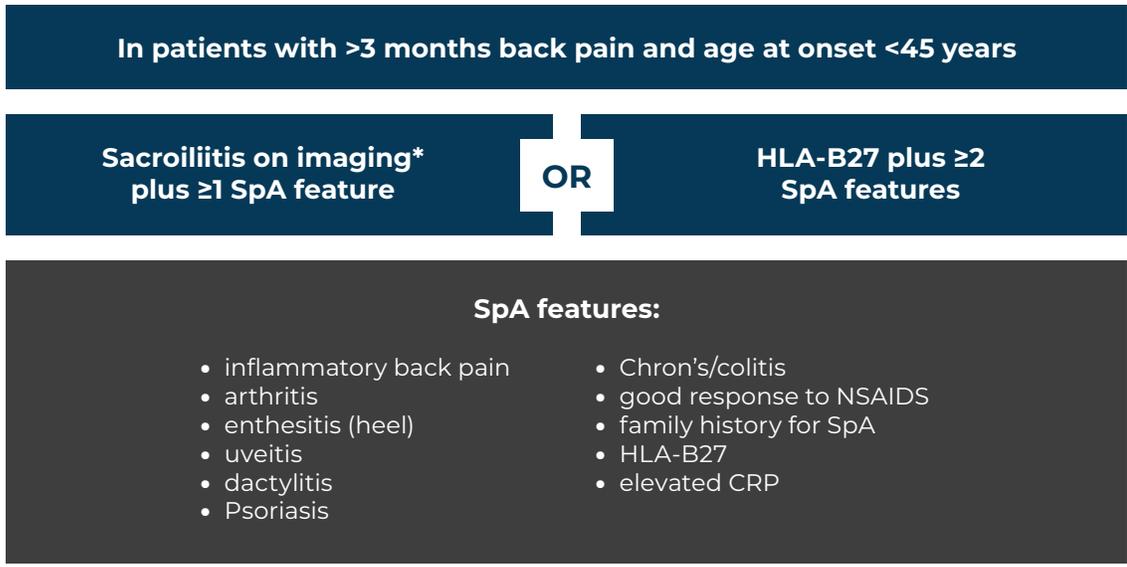
Don't order an HLA-B27 test unless Spondyloarthritis (SpA) is suspected based on specific signs and symptoms.

### Practice Points

1. Ankylosing Spondylitis (SpA) is a progressive inflammatory rheumatologic disease, which can be ameliorated by medical interventions.
2. In patients with  $\geq 3$  months of back pain and age of onset  $< 45$  years, SpA is a potential diagnosis.
3. This diagnosis may be made by finding: sacroiliitis on MRI or HLA-B27 with at least two features of SpA.

### Methods

1. HLA-B27 tests undertaken in Eastern Health laboratory from 2016–2019 were analysed.
2. In 2018, Practice Points Volume 3 provided information on the diagnosis of SpA which was sent to all doctors in NL.
3. Data for 2016 and 2017 was compared to 2018 and 2019.



**N=649 patients with back pain**

**Overall**  
Sensitivity: 82.9%, Specificity: 84.4%

**Imaging Arm Alone**  
Sensitivity: 62.2%, Specificity: 97.3%

**Clinical Arm Alone**  
Sensitivity: 56.6%, Specificity: 83.3%

\*Sacroiliitis on imaging:  
Active (acute) inflammation on MRI highly suggestive of sacroiliitis associated with SpA  
Definite radiographic sacroiliitis according to the modified New York criteria

Figure 1. ASAS Classification Criteria for Axial Spondyloarthritis (SpA)

## Results

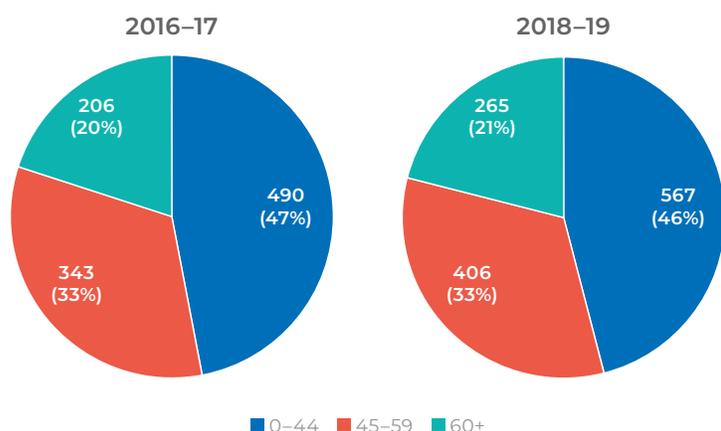


Figure 2. Proportion of HLA-B27 Tests by Age Group by Year

- In 2016-17, there were 1,039 tests undertaken and in 2018-19 the number increased by 19% to 1,238. There was little change in the proportion aged <45 years. Over half of the tests were undertaken in people at low risk of HLA-B27.

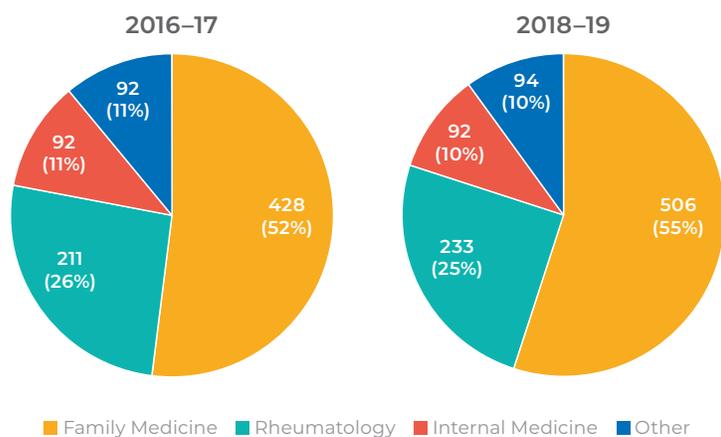


Figure 3. Proportion of HLA-B27 Tests Ordered by Health Care Provider by Year

- Of the 2,277 ordered from 2016-2019, 52% were by clinicians. For both periods 2016-17 and 2018-19, the distribution by doctor ordering the test was similar, with Family Physicians ordering the majority of tests.

## Conclusions

- The number HLA-B27 tests has increased over time and over half of the tests are in low risk patients.
- Knowledge translation using Practice Points Volume 3 had no impact on appropriate utilization of HLA-B27 tests.
- HLA-B27 tests should be ordered if SpA is suspected based on the presence of low back pain for  $\geq 3$  months with onset <45 years, and the presence of specific signs and symptoms consistent with SpA.