



**UNIVERSITY OF CALGARY**

# Improving wait times and patient experience through implementation of a provincial expedited diagnostic pathway for BI-RADS 5 breast lesions

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## BACKGROUND

- Only 55% of screened Canadian women receive a diagnosis following abnormal mammogram within the recommended interval
- We developed and implemented a provincial diagnostic pathway for all BI-RADS 5 lesions featuring expedited biopsy, early surgical referral and nurse navigator coordination and support

## OBJECTIVES

1. To assess the effect of the BI-RADS 5 Pathway on wait times from imaging to biopsy, surgical referral and consultation
2. To evaluate the patient-reported experience (PRE) during diagnostic assessment

## METHODS

- The BI-RADS 5 Pathway was developed with primary care physicians (PCP), radiology and two Breast Health Programs (BHP)

Breast Imaging Centre	Primary Care Physician	Breast Health Program
<ul style="list-style-type: none"> <li>✓ Textbox on imaging report prompting immediate surgical referral</li> <li>✓ Arrange expedited biopsy</li> </ul>	<ul style="list-style-type: none"> <li>✓ Send surgical referral to BHP or breast surgeon of choice</li> <li>✓ Arrange follow-up to discuss biopsy results, if desired</li> </ul>	<ul style="list-style-type: none"> <li>✓ Arrange surgical consult 5 days post-biopsy for BHP referrals</li> <li>✓ Pre-consultation education by RN navigator</li> </ul>

Figure 1. Key features of the BI-RADS 5 Pathway

- Diagnostic intervals from BI-RADS 5 imaging (DI) were prospectively collected from 2017-18 and compared to a pre-pathway cohort; PRE data was obtained from a voluntary survey

## RESULTS

### Study population

- 1,205 patients were managed on the pathway, 797 primary care physicians and 57 community breast imaging centres participated

## RESULTS

Table 1. Diagnostic intervals for BI-RADS 5 Pathway vs. pre-pathway patients

	Pre-Pathway Controls	BI-RADS 5 Pathway	p-value*
<b>Imaging to biopsy</b>			
Count	128	1,178	
Median (days)	6.0	6.0	0.71
Range (days)	0-57.0	0-88.0	
90 <sup>th</sup> percentile (days)	16.0	14.0	
<b>Biopsy to pathology report</b>			
Count	127	1,178	
Median (days)	5.0	5.0	0.11
Range (days)	0-29.0	0-39.0	
90 <sup>th</sup> percentile (days)	9.0	8.0	
<b>Imaging to surgical referral</b>			
Count	127	957	
Median (days)	15.0	6.0	<0.001
Range (days)	0-39.0	0-93.0	
90 <sup>th</sup> percentile (days)	26.0	8.0	
<b>Imaging to surgical consult</b>			
Count	128	971	
Median (days)	26.0	21.0	<0.001
Range (days)	5.0-70.0	0-113.0	
90 <sup>th</sup> percentile (days)	38.0	34.0	

\*calculated for median

### Diagnostic intervals

- Median, range and 90<sup>th</sup> percentile intervals are displayed in Table 1
- Median intervals from imaging to surgical referral and consult were reduced on the pathway compared to controls (6 vs 15 days, 21 vs 26 days, p<0.001)

### Patient-reported experience

- The voluntary survey was completed by 294 patients
- ≥1 anxiety complaint was endorsed by 92%; 61% found it somewhat difficult to “work, take care of things at home, get along with others” and 17% found it very or extremely difficult
- Prompt surgical consultation (90%), ability to contact an RN with questions (81%), and having an RN coordinate appointments (66%) most reduced anxiety

## RESULTS

### Patient-reported experience (continued)

- 57% preferred to receive biopsy results from a surgeon, while others preferred the PCP for provider familiarity (16%) or the opportunity to research the diagnosis/treatment prior to the surgical visit (27%)

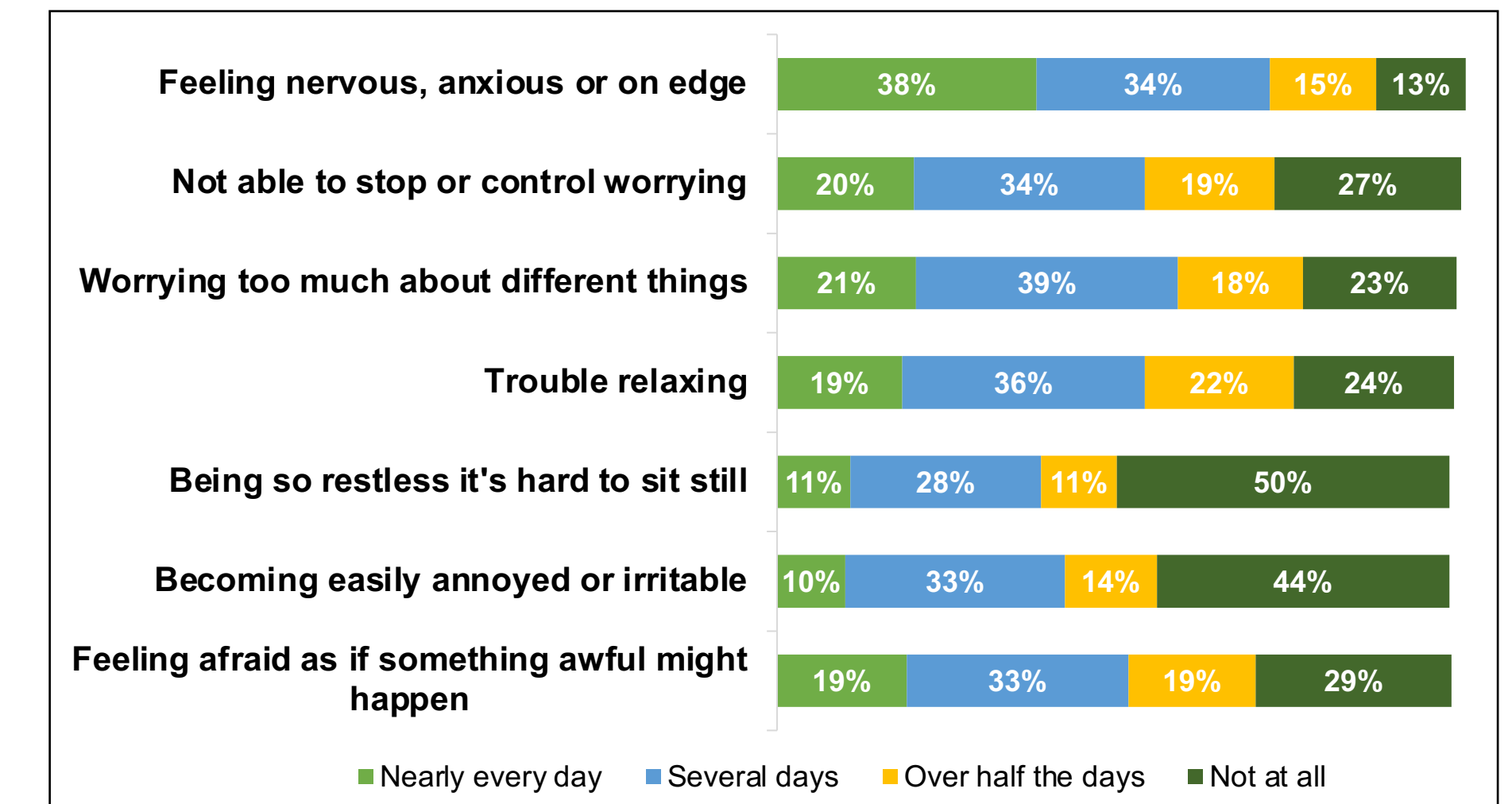


Figure 2. Patient responses to the Generalized Anxiety Disorder 7-item scale (GAD-7) during the interval from BI-RADS 5 imaging to surgical consultation

## CONCLUSIONS

- In a coordinated effort across multiple providers in the province, we successfully implemented a pathway that reduced wait times to surgical consultation for women with BI-RADS 5 breast lesions
- We are the first province to report beyond diagnosis to time of surgical consultation, and one of few studies to assess the PRE
- Diagnostic assessment is highly anxiety-provoking, but multiple elements of the pathway including prompt surgical referral and nurse navigator support improve the patient experience
- Future iterations of the pathway should allow for individualized preferences regarding communication of biopsy results