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# Refining a Postpandemic Approach to Cancer Screening

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The purpose of cancer screening is early detection, which hopefully leads to early cancer prevention/treatment, curability, or at least risk reduction. Cancer screening may be defined as a comprehensive approach to risk stratification that includes patient history, physical examination, social and family history, and recommended testing. Often, however, cancer screening refers to a single modality such as mammography (and newer imaging systems) or colonoscopy (and various stool sample testing options). More sophisticated methods to potentially evaluate screening for multiple cancers using molecular platforms are currently being researched.<sup>1</sup> Examples include the Galleri™ assay (GRAIL, now part of Illumina, Inc.), for which the United Kingdom’s National Health Services launched a clinical trial targeting 140,000 volunteers in September 2021, and CancerSEEK (Exact Sciences Thrive LLC).<sup>2-4</sup>

While continuous advances in cancer screening techniques keep the industry and health care providers on their toes, contemporary practices generally rely on a few staples. We know that ascertaining an accurate family history can identify potential genetic predispositions to cancer. However, in time- and resource-constrained clinical offices, the status of family history collection, documentation, and actionability often are not optimal.<sup>5</sup> Genetic counseling referrals are encouraged but may be underutilized for a variety of reasons, including access (location and cost) and genetic counselor availability in some health systems.<sup>5</sup> Approaches are needed to increase the supply of genetic counselors in number and access. This may include increased training programs, telegenetics, and algorithm-assisted identification of patients for increased genetic assessment.<sup>6,7</sup>

We also know that frequency of cancer screening depends in part on access to health care. During the COVID-19 pandemic, the Centers for Disease Control and Prevention reported 80% declines in screenings for breast and

cervical cancer.<sup>8,9</sup> Unger and colleagues showed that there was a “... precipitous decrease in enrollments during the initial COVID-19 wave, but only a modest reduction during the winter 2020-2021 wave.<sup>10</sup> Over the entire year, steep enrollment reductions were found for cancer control and prevention trials, whereas for treatment trials, enrollments were similar to expected rates.” The authors further noted that “these findings suggest that clinical trial research rapidly adapted to the circumstances of enrolling and treating patients on protocols during the COVID-19 pandemic.”<sup>10</sup> Future studies will further examine screening trends in the pandemic’s aftermath (recognizing that end is currently not defined). There have been calls for “applying a pandemic-like response to cancer prevention.”<sup>11</sup> This could include utilizing personalization (as with precision medicine) or artificial intelligence.<sup>12</sup>



While some screening methods have not been useful — eg, chest X-ray for lung cancer<sup>13</sup> or CA125 testing for ovarian cancer<sup>14</sup> — others have been tested rigorously and been found to have utility, such as computed tomography lung cancer screening in specific populations.<sup>15,16</sup>

In this theme issue of the *Journal of Patient-Centered Research and Reviews (JPCRR)*, multiple articles delve into a range of cancer prevention topics. Brady et al qualitatively evaluated barriers to and promoters of cancer screening.<sup>17</sup> The same authorship group implemented quality improvement strategies over 7 years in an effort to increase cancer screening rates in safety-net primary care practices.<sup>18</sup> In a pair of research studies, Saman et al gleaned patient perceptions of clinical decision support tools targeting cancer prevention,<sup>19</sup> while Schrage et al evaluated the effect of shared decision-making and other patient and clinician characteristics on breast cancer screening rates for women in their 40s.<sup>20</sup> Schad et al reported the negative, but variable, impact of the COVID-19 pandemic on breast, cervical, and colorectal cancer screening rates in primary care settings,<sup>21</sup> and El

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Khoury et al researched patients' potential willingness to overcome some of this disruption through expanded utilization of home-based screening tests for colorectal cancer and cervical cancer.<sup>22</sup> Among the remaining articles published within this issue of *JPCRR*, a topic synopsis on genetic testing for familial hypercholesterolemia shares insights that could also be applied to improving testing for genetic risk in the cancer setting.<sup>23</sup>

There remains much to be learned about how we can best use screening measures, both old and new, to detect malignancies as early as possible without unnecessarily wasting valuable time and resources. The works reported herein add to the ongoing discussions around how to prevent and control cancer for maximal patient benefit while improving the cost of cancer care both in "normal" times and in the context of a pandemic.

### Conflicts of Interest

Dr. Thompson served on an advisory board for GRAIL/Illumina, manufacturer of the investigative Galleri™ multicancer assay.

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