The CDC Tier-Classified Guideline Database: Hypertrophic Cardiomyopathy as a Tier 1 Application

W. David Dotson, PhD
Office of Genomics and Precision Public Health (OGPPH)

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Tier 1 Applications of Genomic Technologies in:

- **Familial hypercholesterolemia** – increased risk for heart disease or stroke due to mutations leading to very high cholesterol levels from an early age

- **Hereditary Breast and Ovarian Cancer Syndrome** – increased risk for breast, ovarian, tubal, peritoneal, and other cancers due to mutations in *BRCA1* or *BRCA2* genes

- **Lynch syndrome** – increased risk for colorectal, endometrial, ovarian, and other cancers associated with mutations in mismatch-repair genes

- *Other conditions?*
Public Health Genomics and Precision Health Knowledge Base (v7.7)

Tier-Classified Guidelines Database

Last data update: Dec 01, 2021. (Total: 412 Documents since 2012)

Enter a search term Search All dataset

All  All Tier 1  All Tier 2  All Tier 3
<table>
<thead>
<tr>
<th>Publication</th>
<th>Tier</th>
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<tbody>
<tr>
<td>Similar articles in PubMed</td>
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<td><strong>Organization:</strong> The American Heart Association (AHA) The American College of Cardiology (ACC)</td>
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<td>Similar articles in PubMed</td>
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<td><strong>Organization:</strong> The European Society of Cardiology (ESC)</td>
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An Expanding List of Tier 1 Genomic Applications: Evidence–based Guidelines for Hypertrophic Cardiomyopathy and Public Health

October 6, 2021 by Michael A. Burke and Laurence S. Sperling, Division of Cardiology, Emory University School of Medicine, Atlanta, Georgia, W. David Dotson and Muin J. Khoury, Office of Genomics and Precision Public Health, Centers for Disease Control and Prevention, Atlanta, Georgia

The CDC Tier-Classified Guideline Database includes three Tier 1 guidelines on hypertrophic cardiomyopathy (HCM). A 2014 guideline from the European Society of Cardiology, a 2017 guideline from the American Heart Association, American College of Cardiology, and Heart Rhythm Society, and a 2020 guideline from the American Heart Association and American College of Cardiology all recommend genetic testing for patients meeting diagnostic criteria for HCM. Each includes
Tier-Classified Guidelines Database

Why did we build it?

- **Challenge:** The public and health care providers are bombarded with information on genomic tests, many with unproven utility

- **Opportunity:** Educate providers and the public about potential benefits and harms of genomic tests and the need for evidence

- **Challenge:** Finding policies, guidelines, and recommendations that include evidence on implementation of genomics or family health history applications

- **Opportunity:** Compile a centralized, searchable, publicly available database for policies, guidelines, and recommendations related to genomics or family health history
Tier-Classified Guidelines Database

*What it is:*

- Repository of genomic guidelines classified according to evidence
- Potential aid to informed decision-making
- Scenario-based
- Systematic
- Subjective
- Context-dependent
Tier-Classified Guidelines Database

*What it is NOT:*

- A substitute for informed decision-making
- An endorsement or recommendation for or against anything
- A comprehensive or complete assessment of tests or scenarios
- The final word in determining what is ready to implement
Tier-Classified Guidelines Database

How it works:

- Guidelines identified in weekly horizon scan are cataloged in PHGKB
- Two reviewers assess these guidelines for inclusion in TCGD component of PHGKB
- Guidelines that address clinical scenario(s) involving genetic testing are included in TCGD
  - Decision rules applied to determine Tier level of clinical scenarios within the guidelines
  - Included guideline documents are assigned the highest Tier level applicable to any recommendation they contain
Tier 1 Criteria:

- FDA label requires use of test to inform choice or dose of a drug, or
- FDA cleared or approved companion diagnostic device, or
- CMS covers testing, or
- One or more clinical practice guidelines, based on systematic review(s), supports testing
Where to Find Out More

- Tier-Classified Guidelines Database
  https://phgkb.cdc.gov/PHGKB/tierStartPage.action

- OGPPPH Blog Posts
  - Introducing the CDC Tier-Classified Guidelines Database
  - Frequently Asked Questions about the CDC Tier-Classified Guidelines Database
    https://blogs.cdc.gov/genomics/2019/07/16/frequently-asked-questions/
  - An Expanding List of Tier 1 Genomic Applications: Evidence-based Guidelines for Hypertrophic Cardiomyopathy and Public Health
    https://blogs.cdc.gov/genomics/2021/10/06/an-expanding-list-of-tier-1/
Thank You!

The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.