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

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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)

PHGKB
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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

Publication	Tier
2017 AHA/ACC/HRS Guideline for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. Al-Khatib Sana M et al. Circulation 2017 138(13) e272-e391 Similar articles in PubMed	1
2020 AHA/ACC Guideline for the Diagnosis and Treatment of Patients With Hypertrophic Cardiomyopathy: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Steve R Ommen, et al. Journal of the American College of Cardiology 2020 Nov Similar articles in PubMed **Organization:** *The American Heart Association (AHA) The American College of Cardiology (ACC)*	1
2014 ESC Guidelines on diagnosis and management of hypertrophic cardiomyopathy: the Task Force for the Diagnosis and Management of Hypertrophic Cardiomyopathy of the European Society of Cardiology (ESC). Authors/Task Force members, et al. Eur Heart J. 2014 Oct 14;35(39):2733-79 Similar articles in PubMed **Organization:** *The European Society of Cardiology (ESC)*	1

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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
- OGPPH Blog Posts
  - Introducing the CDC Tier-Classified Guidelines Database https://blogs.cdc.gov/genomics/2019/07/16/introducing-the-cdc-tier/
  - 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.