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## Commentary: A stitch in time saves nine, but medical therapy makes that stitch shine

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Ischemic cardiomyopathy (ICM) is a leading cause of morbidity and mortality across the globe, with a rapidly growing number of affected patients in the US and a poor prognosis overall.<sup>1</sup> Median survival is not substantially greater than 5 years in patients with ICM and reduced ejection fraction (EF).<sup>2</sup> Although primary prevention of coronary artery disease (CAD) is the sole hope of effectively lessening the societal burden of this disease, effective secondary prevention can preserve some quality and quantity of life in patients diagnosed with ICM.

Surgical and percutaneous revascularization have prolonged and improved the lives of millions of patients with CAD and ICM over the last 40-plus years; however, the therapeutic effectiveness of myocardial revascularization has increased in only limited increments despite advances in technology and technique. Yet survival of patients with ICM has continued to increase, attributable in large part to the progress made in the medical management of CAD and ICM.

In this edition of the *Journal*, Farsky and colleagues<sup>3</sup> report a post hoc analysis of the 10-year data from the prospective randomized Surgical Treatment for Ischemic Cardiomyopathy (STICH) trial. They compare optimal medical therapy (OMT) with non-OMT in both arms of the trial (coronary artery bypass grafting [CABG] + medication and medication alone). Using an a priori definition of OMT



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### CENTRAL MESSAGE

Ensuring optimal medical therapy through a team approach will improve the long-term outcomes of patients with ischemic heart disease undergoing coronary artery bypass grafting.

and patient self-reported data on drug compliance, they show a substantial benefit of OMT over non-OMT in both arms of the trial that enrolled patients with an EF <35%.

The original publication of the 10-year STICH data<sup>2</sup> showed an absolute mortality reduction of 7.2% with CABG over medical management alone for a number needed to treat of 14. The absolute mortality reduction in this study, comparing the worst of both worlds (ie, non-OMT alone) to the best of both worlds (CABG + OMT) was 17%, cutting the NNT down to 6.

These findings are not necessarily surprising, but they dramatically show the importance of OMT in this vulnerable patient population. Trials of long-acting beta-blockers (CAPRICORN,<sup>4</sup> MERIT-HF<sup>5</sup>), angiotensin-converting enzyme inhibitors (TRACE,<sup>6</sup> SAVE,<sup>7</sup> AIRE<sup>8</sup>), angiotensin receptor blockers (VALIANT<sup>9</sup>), mineralocorticoid receptor antagonists (EPHESUS<sup>10</sup>), and angiotensin receptor neprilysin inhibitor (PARADIGM-HF<sup>11</sup>) have shown significantly improved survival in patients with heart failure with reduced EF and are an integral part of guideline-directed medical therapy.<sup>12</sup> CABG, although improving myocardial blood supply and potentially preventing future myocardial infarction, is ultimately limited in its ability to remodel the left ventricle, reduce wall tension, and improve systolic and diastolic function in ICM. Unfortunately, adherence to even simpler medicine regimens in patients with normal EF undergoing CABG is notoriously poor.<sup>13</sup>

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Disclosures: The authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

Received for publication Dec 30, 2020; revisions received Dec 30, 2020; accepted for publication Dec 30, 2020; available ahead of print Jan 9, 2021.

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J Thorac Cardiovasc Surg 2022;164:1900-1  
0022-5223/\$0.00

Published by Elsevier Inc. on behalf of The American Association for Thoracic Surgery

<https://doi.org/10.1016/j.jtcvs.2020.12.139>

Few important lessons should be taken away from this study: (1) many patients are receiving suboptimal medical therapy (at baseline), and we must do better both before and after CABG; (2) improving and maintaining drug compliance is hard work but can be done—patient education is key and pays dividends down the road; and (3) physicians and patients alike must understand that CAD and ICM are complex, multifactorial, chronic disease processes, and a band aid will not suffice. A stitch in time is part of the solution to improve survival, but it should be shined with sustained OMT.

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## Commentary: Just what the doctor ordered: The as-yet unrealized gains of optimal medical therapy for ischemic cardiomyopathy

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In their post hoc analysis of data obtained from the Surgical Treatment for Ischemic Heart Failure (STICH) trial, Farsky and colleagues<sup>1</sup> substantiate the benefit of optimal



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### CENTRAL MESSAGE

The long-term survival benefit conferred by optimal medical therapy in coronary bypass patients with ischemic cardiomyopathy emphasizes the importance of increasing medical compliance.

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Disclosures: The author reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

Received for publication Jan 1, 2021; revisions received Jan 1, 2021; accepted for publication Jan 4, 2021; available ahead of print Jan 13, 2021.

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*J Thorac Cardiovasc Surg* 2022;164:1901-2

0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2021.01.007>