

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



Medical Factual Memorandum for Record

November 19, 2024

A. CASE

NTSB ID: ERA24FA003
Location: Croydon, New Hampshire
Date: October 8, 2023

B. MEDICAL SPECIALIST

Specialist Turan Kayagil, MD, FACEP
 National Transportation Safety Board
 Washington, DC

C. DETAILS

1.0 Description of Review

For purposes of evaluating the pilot for potentially impairing substances and potentially impairing medical conditions, the above Medical Specialist reviewed the following sources of medical information, along with selected relevant regulation, medical literature, and investigator reports.

- Final Federal Aviation Administration (FAA) medical case review
- Autopsy report (including NMS Labs toxicology report)
- FAA Forensic Sciences Laboratory toxicology report

2.0 Summary of Medical Facts

The 73-year-old male pilot's last aviation medical examination was October 19, 2022. At that time, he reported using the prescription blood pressure medications metoprolol and lisinopril, and the prescription cholesterol-controlling medication atorvastatin. He reported a history of high blood pressure and had been granted an

FAA Authorization for Special Issuance of medical certification for coronary artery disease that had been treated with a coronary artery bypass graft (CABG) procedure.¹ At his last medical examination, the Aviation Medical Examiner (AME) issued the pilot a second-class medical certificate under the AME-Assisted Special Issuance process.² The medical certificate was limited by a requirement to wear corrective lenses and was not valid for any class after October 31, 2023.

The State of New Hampshire Office of the Chief Medical Examiner performed the pilot's autopsy. According to the pilot's autopsy report, his cause of death was multiple blunt impact injuries, and his manner of death was accident. Evidence of atherosclerotic and hypertensive cardiovascular disease was identified, including moderate-to-marked coronary artery disease with prior CABG, an enlarged heart with dilatation of both ventricles and thickening of the left ventricular wall, and mild-to-moderate kidney tissue changes of the kind commonly seen with chronic high blood pressure.³ No other significant natural disease was identified.

At the request of the Office of the Chief Medical Examiner, NMS Labs performed toxicological testing of a postmortem femoral blood specimen from the pilot. Caffeine was presumptively detected by screening, without a test to confirm.

The FAA Forensic Sciences Laboratory also performed toxicological testing of postmortem specimens from the pilot. Acetaminophen and rosuvastatin were detected in cavity blood and urine. Metoprolol was detected in urine; cavity blood testing for metoprolol was inconclusive.

Caffeine is a central nervous system stimulant that is commonly ingested, including in coffee, tea, soft drinks, and chocolate; it is also an ingredient in certain anti-drowsiness medications and headache medications. Acetaminophen is a medication available in a wide variety of over-the-counter products as a pain and

¹ According to the FAA medical case review, the pilot was diagnosed with coronary artery disease in 2019 after undergoing angiography for chest pain, and underwent a 5-vessel CABG in April 2019. In April 2020, the FAA granted him an Authorization for Special Issuance for coronary artery disease with CABG and atrial fibrillation. In October 2021, the FAA granted him an Authorization for Aviation-Medical-Examiner-Assisted Special Issuance for coronary artery disease requiring CABG and medication. The FAA medical case review noted a negative treadmill stress test in 2022.

² AME-Assisted Special Issuance is a process by which an AME may re-issue a medical certificate under the provisions of an applicant's FAA Authorization for Special Issuance if the applicant provides specific required medical information from treating physician(s) as set forth in the Authorization letter. AMEs may not issue initial Authorizations, and AME-Assisted Special Issuance determinations are subject to review by the FAA. Additional information about the AME-Assisted Special Issuance process is available on the [FAA AME Guide website](#).

³ Four coronary artery bypass grafts were noted. Heart weight was 548 grams (normal heart weight is roughly 290-510 grams for a male of the pilot's autopsy body weight of 211 pounds). Left cardiac ventricular wall thickness was 1.6 cm (normal is roughly 0.9-1.6 cm). Right cardiac ventricular wall thickness was 0.3 cm (normal is roughly 0.2-0.6 cm). [Kitzman DW, Scholz DG, Hagen PT, Ilstrup DM, Edwards WD. Age-related changes in normal human hearts during the first 10 decades of life. Part II (maturity): a quantitative anatomic study of 765 specimens from subjects 20 to 99 years old. *Mayo Clin Proc.* 1988;63(2):137-146. doi:10.1016/s0025-6196(12)64946-5.]

fever reducer. Rosuvastatin is a prescription medication commonly used to control cholesterol and reduce cardiovascular risk. Metoprolol is a prescription medication that can be used as part of treatment for high blood pressure, certain arrhythmias, and certain types of heart failure. Caffeine, acetaminophen, rosuvastatin, and metoprolol are not generally considered impairing.

Submitted by:

Turan Kayagil, MD, FACEP
Medical Officer