

# National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



## Medical Factual Memorandum for Record

February 20, 2024

### A. CASE

NTSB ID: CEN22FA086  
Location: Livingston, Texas  
Date: December 30, 2021  
Time: About 1141 local time

### 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
- Post-crash hospital records - pilot
- Death certificate - pilot

#### 2.0 Summary of Medical Facts

According to the FAA medical case review, the 73-year-old male pilot's last aviation medical examination was July 15, 2016. At that time, he reported using olmesartan (a prescription oral medication that can be used to treat high blood

pressure) and pork thyroid (a prescription oral medication that can be used to treat low thyroid hormone). He reported medical history including seasonal allergies and high blood pressure. At a prior exam, he had also reported a history of low thyroid hormone. In 2010 he had received an Authorization for Special Issuance of FAA medical certification for low thyroid hormone and high blood pressure requiring medication. No significant issues were identified at his July 15, 2016, examination, and he was issued a second-class medical certificate without limitation. This certificate expired for all classes in 2018. He subsequently completed a BasicMed course, last in June 2020, and reported completing a BasicMed Comprehensive Medical Examination Checklist (CMEC), last in June 2018.<sup>1</sup>

According to the pilot's post-crash hospital records, he was initially alert and speaking when emergency medical services arrived at the crash scene; however, his status deteriorated and he was sedated and intubated prior to being loaded into a helicopter for transport to the hospital. He was admitted to the hospital for his injuries and, despite resuscitative efforts, died in the hospital on January 12, 2022. According to his death certificate, his cause of death was complications following multiple blunt force injuries, and his manner of death was accident.

The records from the hospital documented that the pilot had a history of high blood pressure, high cholesterol, low thyroid hormone, obesity, and prostate cancer. A history of diabetes or borderline diabetes was inconsistently documented. The pilot's home medications were documented as metformin, linagliptin, and empagliflozin (prescription medications commonly used to control blood sugar in diabetes); tamsulosin (a prescription medication commonly used to treat symptoms of a large prostate); low-dose aspirin (an over-the-counter medication commonly used to lower cardiovascular risk); lisinopril (a prescription medication commonly used to treat high blood pressure), and pork thyroid. None of these medications are generally considered impairing.

Imaging was performed during the pilot's hospital stay to evaluate his injuries and their complications. This imaging also identified some evidence of pre-existing natural disease, including coronary artery calcifications and aortic atherosclerosis. Brain computed tomography (CT) imaging performed at 1710 on the crash date showed minimal-to-mild periventricular and deep white matter hypodensities, which the interpreting radiologist noted to be most commonly associated with chronic, microvascular ischemic changes. The pilot's prostate was reported to have an

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<sup>1</sup> BasicMed provisions allow pilots who meet certain requirements to fly without current medical certification. Among those requirements, a pilot must have completed a BasicMed education course within 24 calendar months and must have had a medical examination with a state-licensed physician using the CMEC within 48 months. Aircraft and operating restrictions also apply. For details, see [14 Code of Federal Regulations \(CFR\) Part 68](#), [14 CFR 61.113\(i\)](#), [14 CFR 61.23\(c\)\(3\)](#), and [https://www.faa.gov/licenses\\_certificates/airmen\\_certification/basic\\_med/](https://www.faa.gov/licenses_certificates/airmen_certification/basic_med/).

unremarkable CT appearance; no imaging findings of cancer were specifically noted. A heart ultrasound performed January 10, 2022, did not identify significant disease.

Laboratory tests performed around the time of the pilot's hospital admission were consistent with his critical condition. Ethanol testing around that time was negative (less than 0.01 g/dL, from a blood specimen).<sup>2</sup> Blood glucose around that time was elevated to 282 mg/dL.<sup>3</sup> No diagnosis of diabetic ketoacidosis was made and no hemoglobin A1c (a marker that can be used to assess long-term blood glucose control) was documented. No thyroid laboratory testing was documented. No toxicology testing other than ethanol testing was performed.

No diagnosis was made of any acute pre-crash medical event. One provider note indicated that the back seat passenger witnesses in the helicopter reportedly had said the pilot had not had any complaints or loss of consciousness prior to the crash; the source of this information was not clear from the provider note.

Submitted by:

Turan Kayagil, MD, FACEP  
Medical Officer

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<sup>2</sup> The collection time of the specimen used for ethanol testing was not explicitly documented in reviewed records, nor was whether the testing was performed on whole blood. The order for the ethanol test was placed at 1346 and resulted at 1637 on the crash date.

<sup>3</sup> For many adults with diabetes, recommended pre-meal blood sugars are between 80 and 130 mg/dL, and recommended peak after-meal blood sugars are less than 180 mg/dL. Generally, blood glucose in hospitalized individuals is defined as being high if above 140 mg/dL. The body's stress response can cause blood glucose to acutely increase after traumatic injury in individuals with diabetes.