

CASE STUDY

Acute Care > Case #101

Low SpHb™ Reading Triggers Lifesaving Intervention *Masimo Radical-7™ with SpHb Detects Unsuspected Internal Bleeding*

Location	Singapore
Facility Reporting	Endoscopy Center at Mount Elizabeth Medical Centre
Patient Event	Unsuspected Internal Bleeding and Iron Deficiency Anemia (IDA)

> The Situation

An apparently healthy woman was alarmed by a low noninvasive hemoglobin (SpHb) measurement of 7g/dL taken by her husband, a Masimo representative, using the Masimo Radical-7 Pulse CO-Oximeter. The 7g/dL SpHb measurement was confirmed two days later via laboratory blood analysis. Lab analysis also showed that her iron level was extremely low at 1 µmol/L. For an adult female, normal iron values range between 6-27 µmol/L, while normal hemoglobin values range between 12-16g/dL. The patient had no signs or symptoms to suggest something was wrong. In fact, she had the same noninvasive hemoglobin test performed 6 months prior and received a normal result of 13.4g/dL. She was referred for an endoscopic exam to investigate the cause of her anemia.

During the endoscopic examination, two small bleeding ulcers were discovered and another blood test was performed to assess the extent of the patient's blood loss. The second blood test revealed that her hemoglobin was dropping rapidly—now dangerously low at 6.6g/dL—signaling the need for critical intervention. The patient was immediately prepped for an emergency blood transfusion and a third blood test was performed for matching. The resulting hemoglobin measurement was now down to 6.4g/dL, indicating that the patient was still bleeding and in grave danger. Seizure and collapse could be imminent if she did not receive a blood transfusion right away.

> The Masimo Difference

The patient was transfused one liter of blood overnight. The next morning, blood tests confirmed she was out of immediate danger and her hemoglobin was stabilizing. By 10 a.m., she was discharged home with a normal hemoglobin level. Subsequent tests revealed the cause of her ulcers and chronic iron deficiency to be a fairly common bacteria, *Helicobacter pylori* (*H. pylori*), which is a known cause of the development of duodenal/stomach ulcers and strongly linked to stomach cancer. The patient was prescribed medications to eradicate the bacterial infection, and iron supplements to build up her iron level. Today, she is healthy and happy with her quick recovery thanks to the early detection and intervention facilitated by Masimo SpHb.

It is believed that the patient had been bleeding internally and deteriorating for months—conceivably just after the first noninvasive hemoglobin measurement was taken. However, because she was taking an aspirin each day, her condition was exacerbated—making that second random noninvasive hemoglobin measurement just a few months later a true life-saver.

"The noninvasive hemoglobin test led to the diagnosis and treatment that saved my wife's life!"

- Jim Litchfield, husband



Hospital clinicians prep the patient for an emergency blood transfusion.



The next day, the patient and her daughter celebrated New Year's safely at home.

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