



**Case report:** radiation and chemotherapy  
**Medical field:** oncology

## 1

### Patient data



Age: 56 years  
 Gender: female  
 Height: 5.41 ft

Initial weight: 127.87 lbs  
 Initial BMI: 21.30 kg/m<sup>2</sup>

## 2

### Medical history / diagnosis

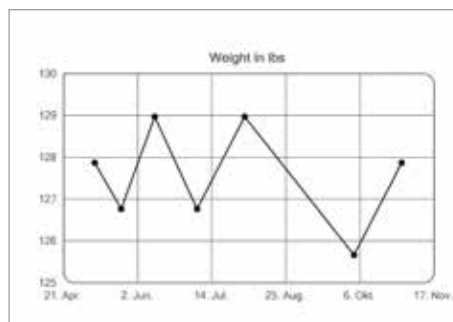
A 56 year-old female patient has endometrial cancer. A combined treatment involving chemotherapy (Taxol and Carboplatin) and radiotherapy is being implemented. In the process, the patient's state of nutrition is to be monitored and improved if necessary with the aid of parenteral nutrition (PN).

## 3

### Graphs of measuring results

#### Weight

The patient loses weight after every chemotherapy or radiotherapy treatment. Parenteral nutrition following each treatment enabled the weight to be stabilized again. The weight graph over 26 weeks with a total of seven measured data is shown below:

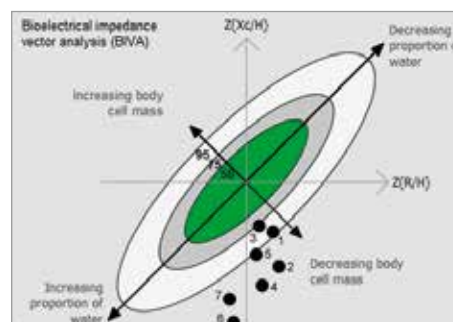


- Measurement 1 (Week 1): 127.87 lbs
- Measurement 2 (Week 3): 126.77 lbs
- Measurement 3 (Week 6): 128.97 lbs
- Measurement 4 (Week 9): 126.77 lbs
- Measurement 5 (Week 13): 128.97 lbs
- Measurement 6 (Week 22): 125.66 lbs
- Measurement 7 (Week 26): 127.87 lbs

## Bioelectrical impedance vector analysis (BIVA)

The progress in the state of nutrition can be followed in the BIVA:

- Measurement 1:  
start of chemotherapy
- Measurement 2:  
1.10 lbs lost, loss of appetite, PN started
- Measurement 3:  
2.20 lbs gained, PN stopped, radiotherapy started
- Measurement 4:  
2.20 lbs lost, loss of appetite, diarrhea, PN started
- Measurement 5:  
2.20 lbs gained, PN stopped
- Measurement 6:  
3.31 lbs kg lost, metastases in peritoneum, PN started
- Measurement 7:  
2.20 lbs gained



## 4 Summary

The treatment of endometrial cancer in a 56 year-old female patient shows clear changes in the state of nutrition. BIVA allows the interaction of therapy and parenteral nutrition to be tracked and assessed very well. Following the start of treatment, there is a reduction in body cell mass. It was possible to halt this reduction by means of parenteral nutrition, and body cell mass rises again. The BIVA graph also shows the continuous deterioration in body composition. This might not be detected using weight alone, which demonstrates the necessity for a seca mBCA measurement to assess the nutritional state correctly.

**The changes in the state of nutrition caused by chemotherapy and radiotherapy can be visualized with the aid of the seca mBCA, in particular by considering the BIVA; parenteral nutrition measures can be derived from this to offer the patient the best possible quality of life.**