

Management of an Urgent Non-Cardiac Surgery in a Patient with Incomplete Pacemaker Interrogation and High Cardiac Risk

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INTRODUCTION

Cardiac implantable electronic devices (CIEDs) create perioperative challenges when interrogation data are outdated or unavailable. Missing interrogation, uncertain pacing dependence, and potential electromagnetic interference (EMI) require careful risk–benefit assessment.

Earlier guidance (e.g., 2014 ACC/AHA) classified conduction disease as higher risk, but the 2024 update emphasizes individualized, shared decision-making.

This case highlights the perioperative decision-making required when urgent oncologic surgery must proceed despite incomplete pacemaker interrogation and uncertain cardiac risk.

THE PATIENT

63 year old female presenting with differentiated vulvar intraepithelial neoplasia (dVIN) for a scheduled radical partial vulvectomy with a past medical history of:

Cardiac Related History	Non-Cardiac Related History
•Complete heart block •PPM implant (Medtronic 2010, last battery change 2023) •CHF •Obesity (s/p gastric sleeve) •Smoking	•Fibroids (s/p hysterectomy) •Differential vulvar intraepithelial neoplasia (dVIN) •Thyroid nodules (s/p thyroidectomy) •Rheumatoid Arthritis

REFERENCES

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2. Wan E et al. Circulation. 2024;150:E183–196.
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DISCUSSION

This case shows how careful coordination and targeted mitigation strategies can overcome information gaps and still support safe surgical care.

•**Missing data:** No recent interrogation or cardiology evaluation limited cardiac risk stratification.

•**Decision-making:** Revised cardiac index was low. Urgent oncologic risk outweighed delay for interrogation. EP confirmed non-dependence, allowing surgery with precautions.

•**Anesthetic approach:** Below-umbilicus surgery and neuraxial technique minimized EMI exposure and hemodynamic swings.

•**Safety measures:** Continuous ECG, magnet availability, proper cautery pad placement, and pacing pads on standby in the room.

•**Teamwork:** Close coordination with EP and surgery ensured safe management despite incomplete device data.

CONCLUSION

In urgent cases or when patients are lost to follow-up, anesthesiologists must balance surgical urgency with safe perioperative planning.

- Urgent surgery can proceed without recent pacemaker interrogation when risk is carefully assessed and pacing dependence is excluded.
- Neuraxial anesthesia and vigilant monitoring are appropriate for non-dependent CIED patients undergoing lower-body surgery.
- If the patient was pacemaker dependent, The team would have required device reprogramming to asynchronous mode or magnet application before surgery and possibly postponed the case if interrogation remained unavailable.
- Multidisciplinary communication is essential in data-limited CIED cases.

