

NRT FINDINGS IN VESTIBULAR INSERTION

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Vestibular insertion was detected in 5 patients after (& during) cochlear implant surgery

5 PATIENTS

Age: 3 – 46

Implant model:

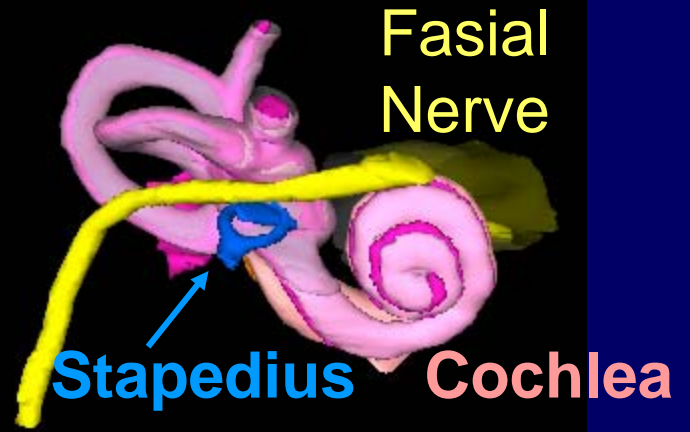
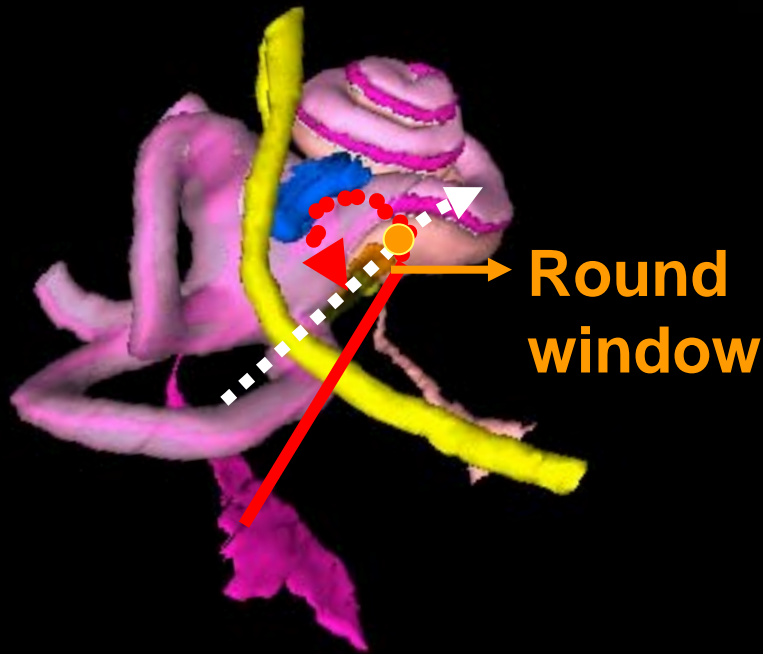
CI 24 M: 1

Contour: 2

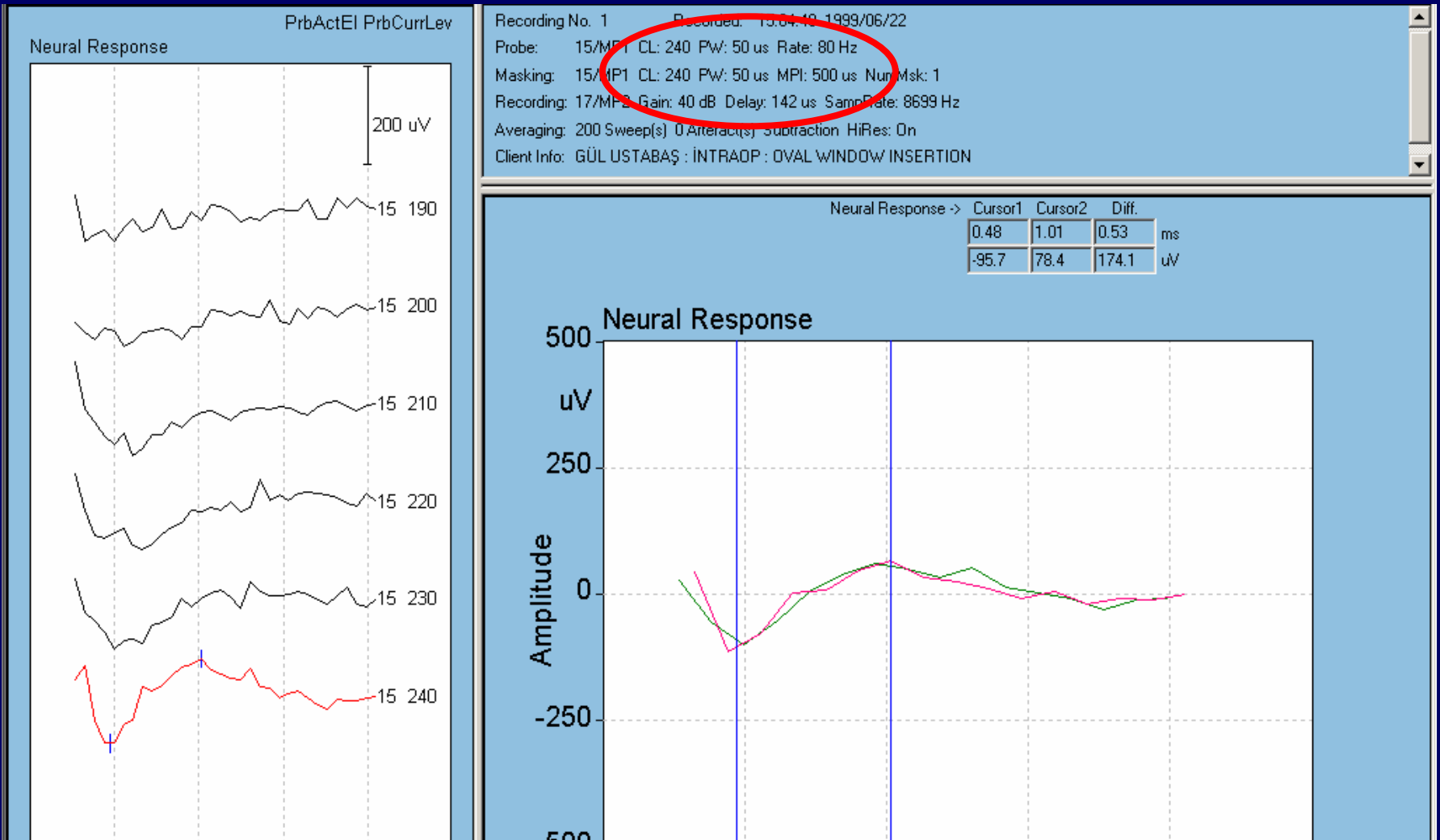
Freedom: 2

- In four patients normal cochleostomy was done.
- In one patient tympanic channel could not be found.
CI24 M inserted through oval window (full insertion).

Insertion sırasındaki pozisyon

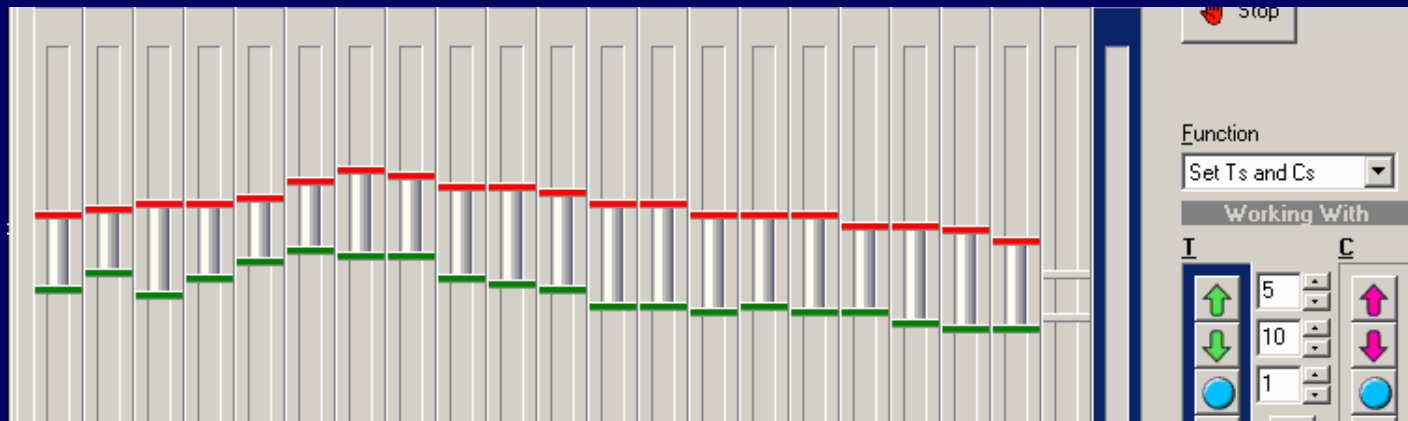


Case 1: NRT recording after oval window insertion (1st op.)



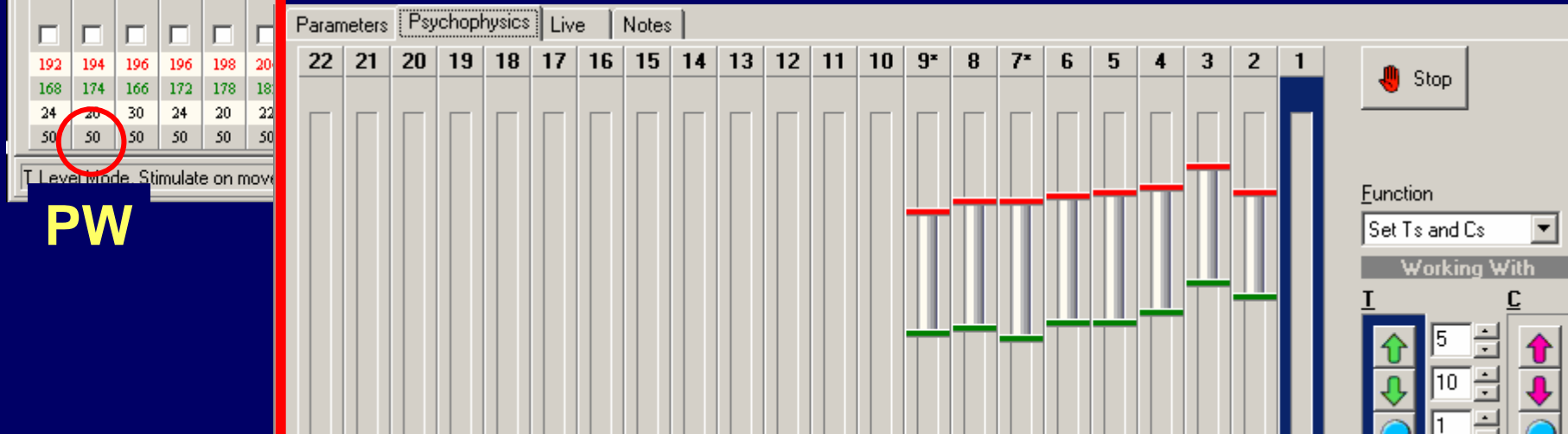
Probe level, PW and Delay are all increased significantly

MAP After Oval Window Insertion



MAP after 2nd operation (re-implant)

- Basal and 2nd turn drilled out; but tympanic channel could not be fund (ossification).
- CI24 M laid on basal turn.
- NRT could not be obtained.



CASE 2

Age: 3

Aetiology: Congenital/Unknown.

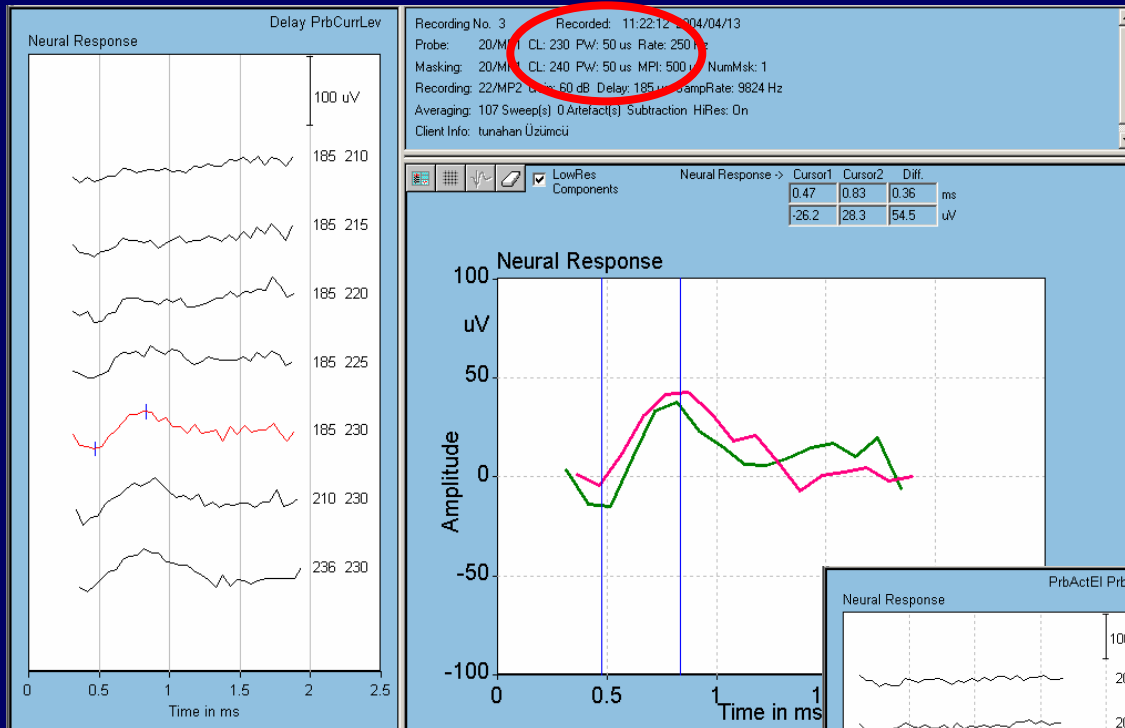
First Operation:

- **Cochleostomy was done successfully.**
- **CI24 Contour inserted through cochleostomy**
- **NRT response could not be obtained.**

Second operation (re-implant):

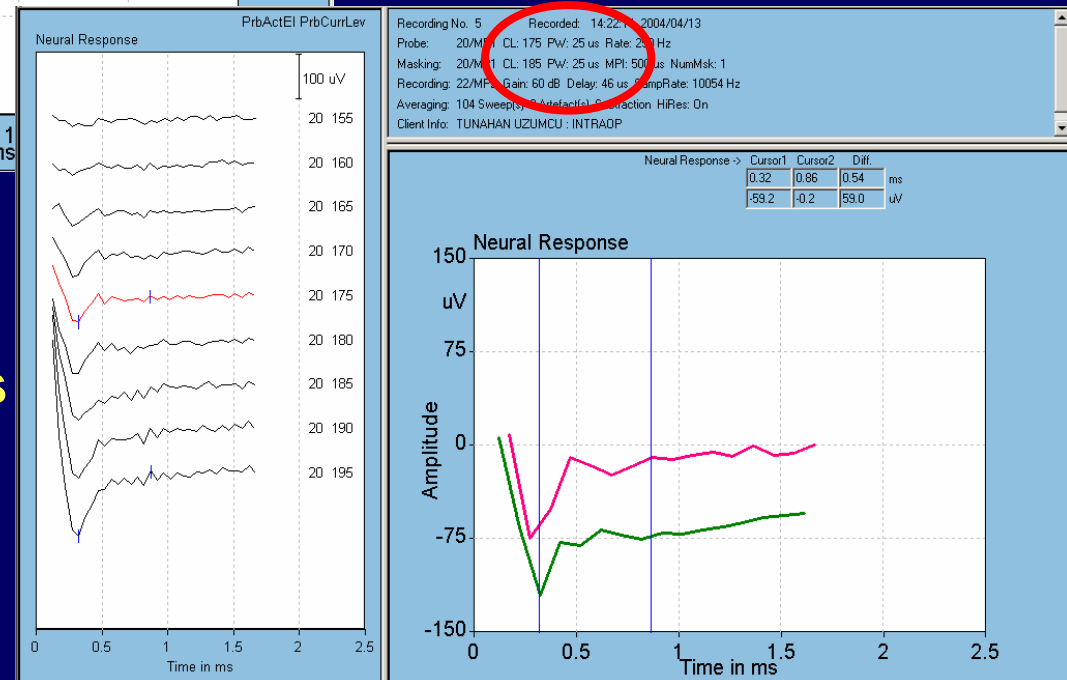
- **Before the operation NRT records obtained (vestibular).**
- **Electrodes were inserted to cochlea (full insertion).**
- **After re-implantation NRT test repeated (cochlear).**

NRT after vestibular insertion

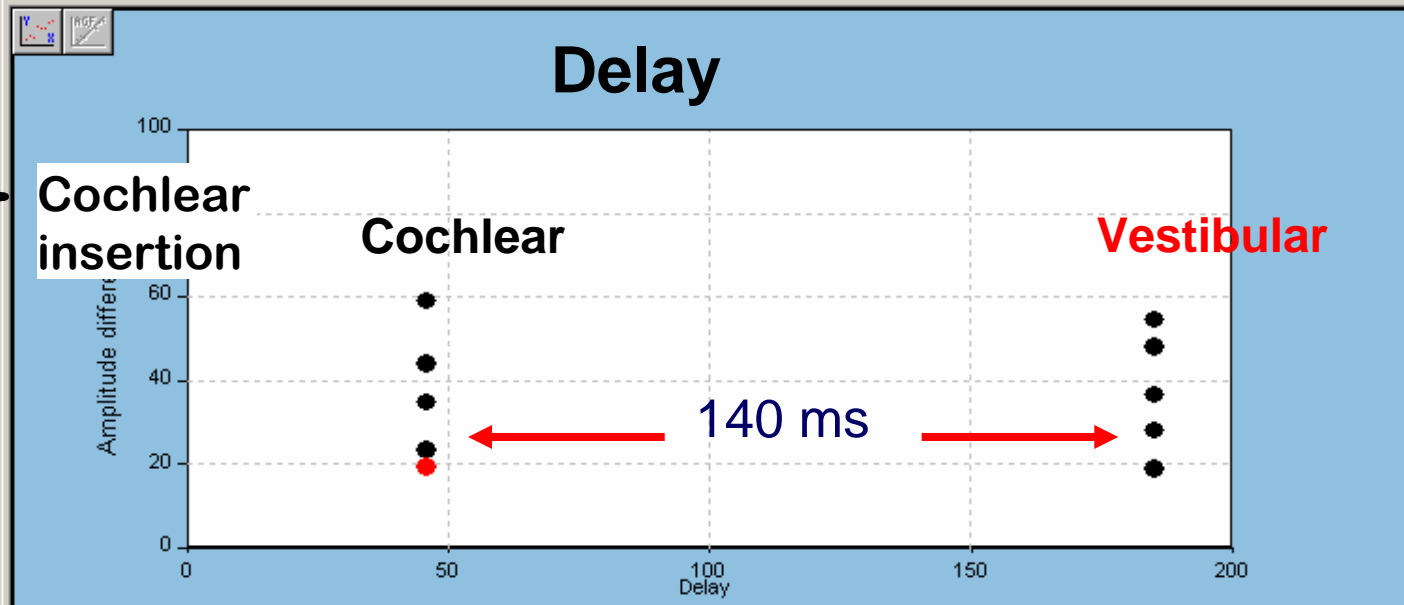
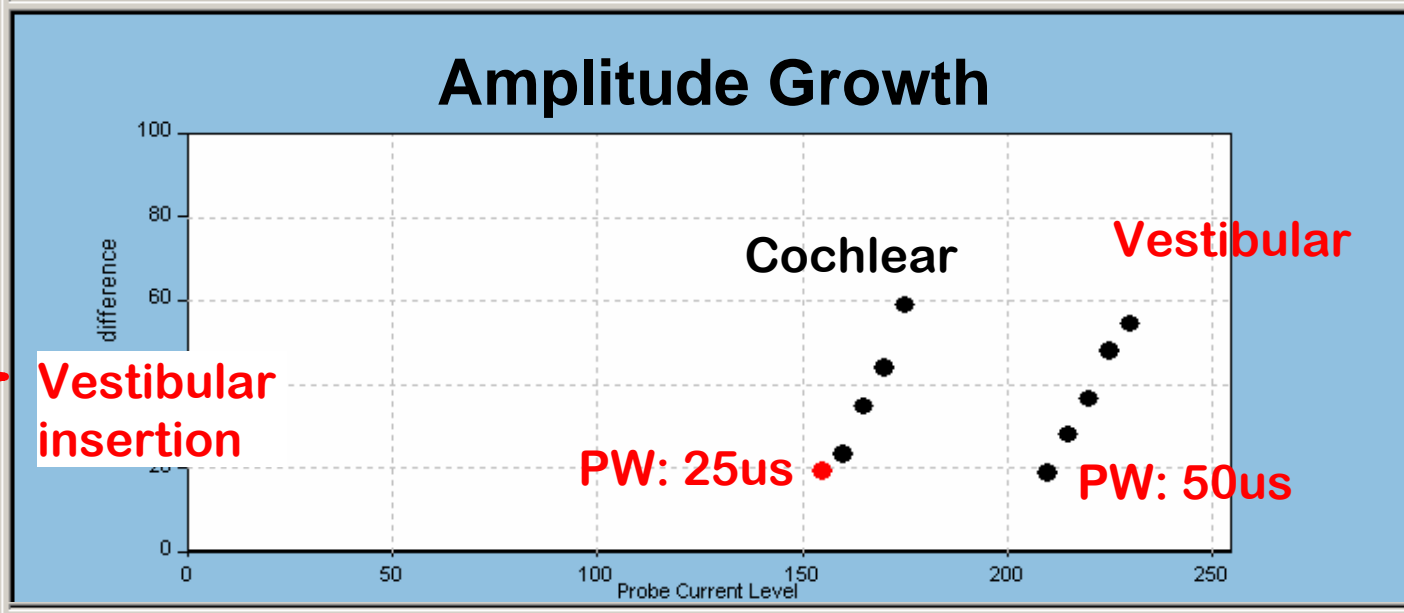
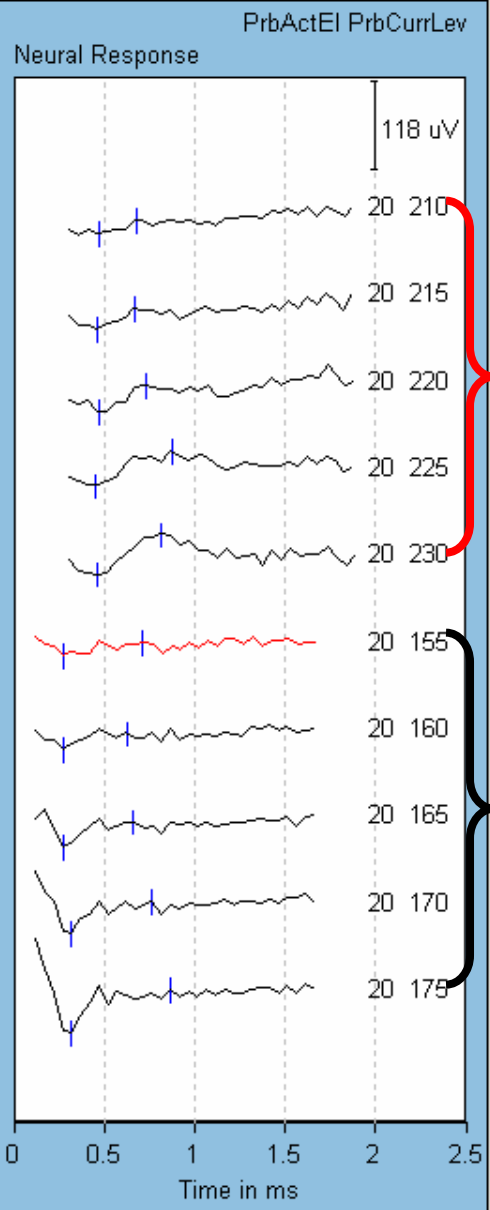


Cochlear insertion

- Stimulus PW decreased from 50 us to 25 us(default)
- Delay decreased from 185 ms to 46 ms



Vestibular vs Cochlear



CONCLUSION

- **Recording of ECAP does not proof cochlear insertion.**
- **Increase in delay of recording & current level should alert operation team.**