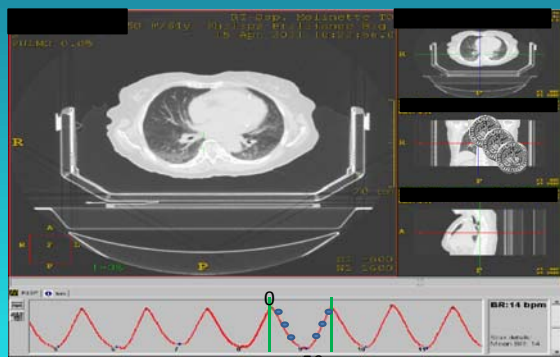


Breath training in lung SABR

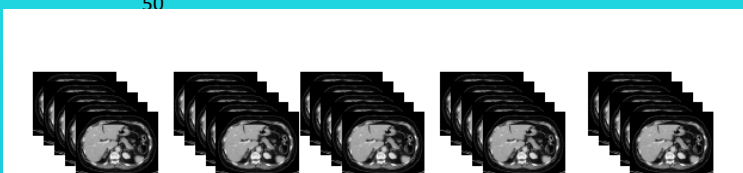
Badellino S., Cadoni F., Giglioli F.R., Boschetti A., Fiandra C., Fusella M., Guarneri A., Filippi A.R., Ricardi U., Ragona R.

E-mail address: serena.badellino@tiscali.it (S. Badellino)



Introduction: 4D CT is used for target volume delineation for lung SABR

- 40% of patients excluded = irregular breath cycle and/or breath rate range

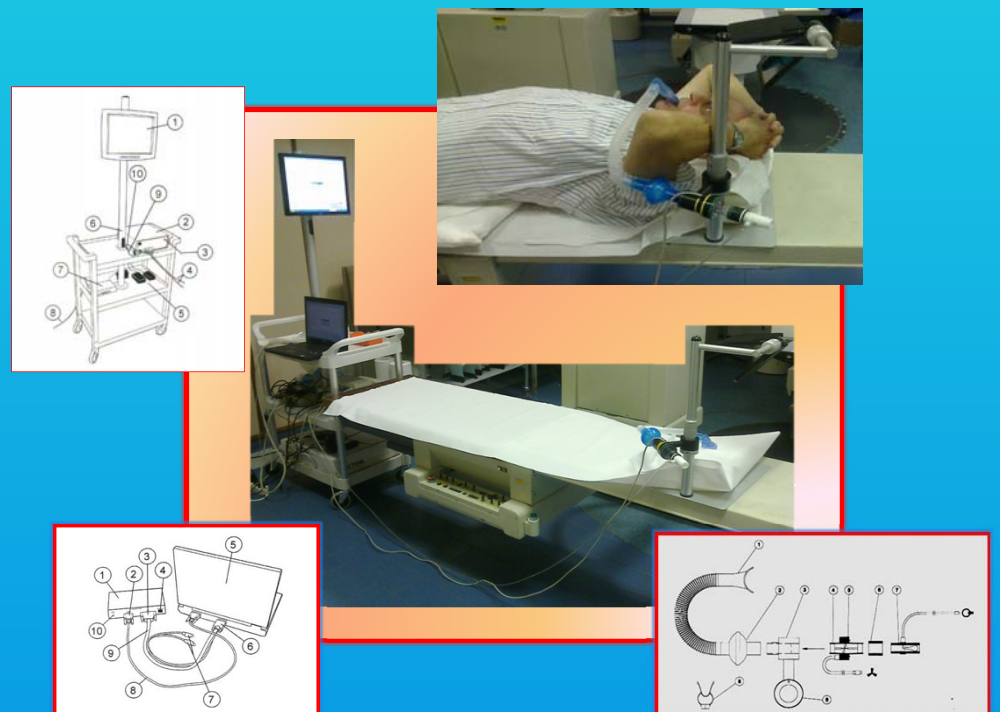


Scan lenght: 20	Average full exhalation phase: 58%
Numero di cicli catturati: 21	Average full inhalation phase: 99%
Mean BRT: 23 bpm	Amplitude range: 0.89-1.12
Breath rate range: 22-27 bpm	Amplitude standard deviation: 0.05

Aim: to evaluate if respiratory training before 4DCT would increase the rate of lung cancer patients eligible to 4DCT

The study: an Elekta ABC system was used to help patients in visualizing their breath cycle on a monitor connected to a spirometer.

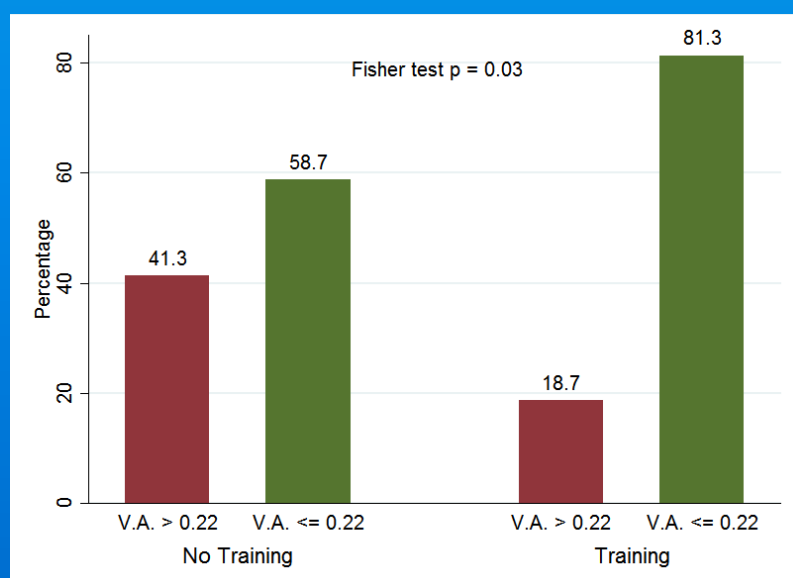
This training was aimed to check their breath rate and then try to maintain it constant over time



2 groups: Control group: 50 patients

Training group: 40 patients

Statistical analysis



- no significant differences in the interval between maximum and minimum breath;
- a significantly higher proportion of patients in the training group had an acceptable amplitude variance (Fisher test p=0.03).

Conclusion: a breath training protocol may be useful in limiting respiratory movements and increasing the proportion of lung cancer patients eligible for 4DCT prior to SABR