



## C-Trg 4

# Use of lasers in obstetrics and gynaecology by Fellows and Trainees of RANZCOG

*Consensus statement of the Royal Australian & New Zealand College of Obstetricians & Gynaecologists (RANZCOG) and the Australian Gynaecological Endoscopy Society (AGES).*

Lasers can be used in several clinical settings in obstetric and gynaecological surgery but at present have a limited clinical role. Fellows should consider the evidence supporting the use of these devices before committing valuable resources to such expensive technology.

- **Gynaecology**

- ***Treatment of lower genital tract precancer and condylomata***

- The laser of choice in this situation is the Carbon Dioxide (CO<sub>2</sub>) laser. Debate continues about the pros and cons of Laser ablation versus LLETZ for the treatment of cervical intraepithelial neoplasia.

- **Obstetrics**

- Selective laser photocoagulation (SLPC) has been used with some success in the treatment of twin-twin transfusion syndrome, with a survival of at least one fetus in 75-90% of cases (Walker et al., 2007). The laser of choice is either the Neodymium:YAG (Nd:YAG) or a Diode Pumped Solid State Laser (Diode Laser) with a wavelength of 400-600nm.

- **Laparoscopic surgery**

- A number of different types of Laser have been used in laparoscopic surgery. There is no substantive evidence to support the use of Laser as opposed to any other energy source in laparoscopic surgery.

## Training

1. Those performing laser surgery must be familiar with the use of lasers in medical settings.
  - (a) The **physics, effects and safety aspects** of lasers in surgery (an accredited biomedical engineer should guide this part of the course);
  - (b) the **clinical aspects** of lasers in gynaecology which should cover the application and techniques for using lasers in one or more of the settings outlined in the background.
2. The specialist should attend a number of theatre/outpatient sessions observing the use of laser in an operative setting.
3. Where possible, invite a preceptor to observe the first few cases in the clinician's hospital environment.

Once these criteria have been fulfilled, credentialing in one or more of the clinical settings should be issued by the hospital before the clinician commences laser surgery as an independent operator.

## References and Useful Links

1. Australian Gynaecological Endoscopy Society (AGES). <http://www.ages.com.au>
2. AS/NZS 4173: 1994 Guide to the safe use of lasers in health care.
3. Nizard J. Barbet JP. Ville Y. Does the source of laser energy influence the coagulation of chorionic plate vessels? Comparison of Nd:YAG and diode laser on an ex vivo placental model. *Fetal Diagnosis & Therapy*. 22(1):33-7, 2007. UI: 17003553. ISSN Print: 1015-3837.  
Accessed 14 June 2007  
[http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=PubMed&list\\_uids=17003553&dopt=Citation](http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=PubMed&list_uids=17003553&dopt=Citation)
4. Walker SP, Cole SA, Edwards AG et al. Twin-to-twin transfusion syndrome: is the future getting brighter? *Australian and New Zealand Journal of Obstetrics and Gynaecology* 2007; 47:158-168.
5. Yamamoto M. El Murr L. Robyr R. Leleu F. Takahashi Y. Ville Y. Incidence and impact of perioperative complications in 175 fetoscopy-guided laser coagulations of chorionic plate anastomoses in fetofetal transfusion syndrome before 26 weeks of gestation. *American Journal of Obstetrics & Gynecology*. 193(3) (Supplement):1110-16, Sep 2005. UI: 16157121. ISSN Print: 0002-9378. Accessed 14 June 2007  
<http://www.ajog.org/article/PIIS0002937805010501/abstract>
6. For links to Federal, State and Territory Acts and Regulations relating to legislation on the use of lasers, please refer to Radiation Protection Regulations and Standards in Australia and New Zealand [http://www.arps.org.au/ANZ\\_Regs.php](http://www.arps.org.au/ANZ_Regs.php)

## Links To Other Related College Statements

[C-Trg 1 Guidelines for training in advanced endoscopic surgery and endometrial ablations.](#)

[C-Trg 2 Guidelines for training in advanced operative laparoscopy.](#)

### Disclaimer

This College Statement is intended to provide general advice to Practitioners. The statement should never be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of each patient.

The statement has been prepared having regard to general circumstances. It is the responsibility of each Practitioner to have regard to the particular circumstances of each case, and the application of this statement in each case. In particular, clinical management must always be responsive to the needs of the individual patient and the particular circumstances of each case.

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