

Q&A

We speak to plastic surgeon **Max Murison** about CO₂ laser resurfacing and why the Lumenis UltraPulse system is his device of choice

Aesthetic Medicine: What is your experience with using CO₂ lasers?

Mr Max Murison: I have used CO₂ lasers for over 20 years.

AM: How do CO₂ lasers differ from other lasers/ devices on the market?

MM: The carbon dioxide laser system is the most powerful, but the technology varies between different machines. Some are better than others at treating burns scarring and for laser resurfacing. The machines that we tend to favour are all round products that score highly in all areas of CO₂ laser treatment. The technology offers the practitioner the ability to fine tune the treatments and are extremely flexible and versatile.

AM: What difference has the development of fractional technology made to CO₂ treatments?

MM: Fractional photothermolysis has meant that CO₂ laser treatments can be performed to limit the downtime but still maximise the clinical benefit. The addition of the non-sequential scanning algorithm of the Lumenis laser system reduces the complications and maximises the results as it reduces the risk of bulk heating.

AM: What indications are CO₂ best used for and are there any particular indications that you find it more successful in treating than other treatment options available?

MM: CO₂ laser is best for superficial ablation, skin tightening and treating superficial dyschromia from sun damage. One of the most common indications is treating lines and wrinkles. It is also possible to achieve a significant improvement in certain subtypes of acne scarring. It is particularly good

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at fine tuning scars, reducing elevation and ablating the prominent tumours in conditions such as the vascular angiomas of tuberous sclerosis. The Lumenis system has excelled in its ability to treat burns scarring and the results have been repeated in many centres across the world.

AM: Much importance is placed on treatments with no pain or downtime and many companies claim to be able to deliver comparable results to ablative treatments. In your opinion, can non-ablative treatments with no downtime every really achieve the same outcomes?

MM: The non-ablative treatments do not achieve anything like the amount of improvement that you can achieve with a carbon dioxide laser. We use both systems in our unit, and some people would prefer some improvement with minimal downtime, so the non-ablative therapy becomes the treatment of choice. >



Courtesy of Suzanne Kilmer, MD



Courtesy of Matteo Tretti Clementoni, MD



Courtesy of Robert Bushman, MD

AM: There are many different laser devices on the market today, why did you choose the Lumenis UltraPulse system and what do you like about it?

MM: The Lumenis UltraPulse system is a powerful laser system which has a high rate of work with minimal risk. It works faster and the choice of parameters are very versatile. The UltraPulse also has the shortest pulse duration and the smallest spot size giving it the best ablation/coagulation ratio. This is backed up by an excellent sales and engineering team.

AM: What are the most common myths you hear about CO₂ laser treatments and can you dispel them for us?

MM: One of the most common myths relating to carbon dioxide laser is the risk of scarring. These are powerful machines and in the wrong hands scarring is a possibility, however this is extremely rare in our practice and bears no relation to the technology in use, and it is most often operator error.

The second myth is associated with prolonged redness and although this can happen, usually when the skin is healed it can be covered with makeup. This can be minimised in most situations by reducing the treatment parameters. We always consider the patient's downtime and period of redness that they can tolerate versus the results that they are hoping to achieve with the laser treatment. We therefore agree a balanced tailored treatment for each patient.

AM: When would CO₂ not be suitable and where would you recommend caution?

MM: I would express caution with patients who have deeper dermal pigmentation as in some forms of melasma where any laser treatment can make the pigmentation worse rather than better. Also in darker skin types there is a risk of post treatment hyperpigmentation and this has to be anticipated and any treatment parameters appropriately adjusted.

AM: As a plastic surgeon how do non-surgical treatments like CO₂ sit alongside/compliment what you do surgically?

MM: Carbon dioxide resurfacing and surgical treatment of skin excess complement each other and often one option is not the best for patients and a skin tightening surgical procedure coupled with laser resurfacing to smooth out fine wrinkles and pigmentation can offer the best result for patients.

AM: The UltraPulse is said to be the most powerful CO₂ laser on the market, what is the advantage of this and does more power equal more downtime for the patient?

MM: The high power features of the laser allows an extensive range of parameters and a productive workflow. The most meaningful benefit of this is actually the depth of penetration – up to 4mm – which allows you to treat scars more effectively. Another important aspect of the Lumenis CO₂ laser system is the scanner technology minimises downtime and has a favourable safety profile but still provides very effective clinical results. The benefit on established burn scars is exceptional. **AM**



Courtesy of Jill S. Waibel, MD



Courtesy of Max Murison, MD



Mr Max Murison is a consultant plastic and reconstructive surgeon at The Welsh Regional Centre for Burns and Plastic Surgery, Morriston Hospital, Swansea. He has a special interest in scar treatment with lasers, injectable compounds including chemotherapy, silicone and pressure garment therapy. Mr Murison was appointed to his current post in June 1995 and was instrumental in setting up and running a comprehensive laser service with the addition of an external private laser clinic. The NHS laser clinic in Swansea was set up in 1996 and was the first to offer laser scar treatment with the DeepFX Laser in 2007 and now also offers the new ScaarFX treatments by Lumenis Lasers. These treatments are provided on two sites in Swansea and at Neath Port Talbot Hospital.