

Proximal Priority Laser Technique (PPLT)

By Tina Bakir, June 2022

DEVELOPMENT OF THE PROXIMAL PRIORITY TECHNIQUE (PPT)

One patient greatly influenced the creation of the Proximal Priority Technique (PPT). It was an elderly male with chronic knee pain. The clinician used the laser in contact mode on several points around the knees. At first, the pain was relieved, but a few days later it returned worse than before. The patient could no longer walk. An X-ray revealed severe stenosis of the spinal cord at the L4/L5 level. The author “started his next LLLT session from above the stenotic area, and worked down towards the knees. All pain was relieved after 6 weeks’ treatment, and the patient remained pain free over a long follow-up” ([Fuji](#)).

It was from these results that the author developed his “original proximal priority technique, particularly for chronic pain” ([Fuji](#)). No matter where the painful area was, the author started each treatment from the neck, “working around the base of the skull to irradiate the C1/C2 area” ([Fuji](#)). How well this method worked was shown in a retrospective study on 542 patients with recalcitrant chronic lumbar pain. PPT achieved an overall efficacy of 82% ([Fuji](#)). Ohshiro later combined PPT and LLLT for infertility.

Ohshiro explains that the brain is the control center for the rest of the body. The carotid arteries are the main blood supply to the head, “and the deep penetration of the 830 nm beam applied to the side of the neck can involve and photoactivate the external and internal carotids, increasing the blood supply to the brain and creating a systemic parasympathetic system-mediated whole body effect” ([Ohshiro 2012](#)). Gentle neck-stretching accompanied the neck irradiation “which enhance treatment efficacy” ([Ohshiro 2012](#)).

Application of PPT

A PPT session involves “10 minutes of PPT where laser is irradiated solely to the nuchal area while the therapist first stretches the neck region and then [sic] goes on to stretch other areas in the order of shoulder, pectoral region, spine, lower back and finally the lower limbs. This treatment commences at the proximal region in relation to the two centers of the nervous system and circulatory system followed by treatment of the periphery” ([Fuji](#)). Following the PPT, the reproductive organs were treated for an additional 10 minutes for a total of 20 minutes of laser irradiation per session ([Fuji](#)).

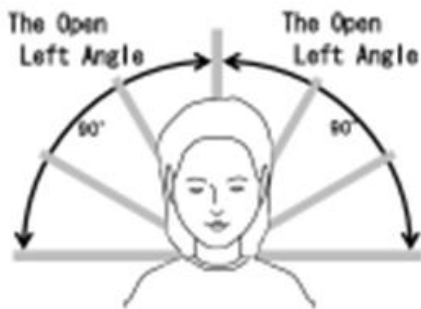
PPT becomes PPLT

Proximate Priority Treatment evolved over time. The author refined his technique and created the “second generation” of PPT, calling it Proximal Priority Laser Technique (PPLT). ([Ohshiro 2012](#)). The system delivers the “60 mW output at the deep-penetrating near-infrared wavelength of 830 nm in continuous wave, with an irradiated area in contact mode at the tissue of 0.05 cm², giving an irradiance at tissue of 1.2 W/cm²” ([Ohshiro 2012](#)).

PPLT is comprised of three procedures, described below. (Please speak to your doctor before you try PPLT):

1. The 1st Procedure – Neck Stretching Approach

After a patient work-up to check for any pre-existing medical condition (tumor, pacemaker) that might make LLLT unsafe (Please take note: tumors and pacemakers make this treatment unsafe), the laser is placed on “any area of the skin surface around the neck in contact therapy”. The clinician has the patient lie down on their back and bring their left ear to their left shoulder, right ear to right shoulder. Whichever side opens further is treated first, meaning it is less-stiff. The clinician treats the less-stiff side of the neck first, softens and stretches the less-stiff side, then treats the more-stiff side ([Ohshiro 2012](#)).



- **The 2nd Procedure – Trunk-Stretching Approach**

While the patient twists one leg across their body as shown below, as far as they can, the laser is again applied to any area of the neck *on the same side as the leg that is being stretched* for 8 – 15 seconds. Note, do not place the laser on the side of your neck with the straight leg. Then you repeat on the other side ([Ohshiro 2012](#)).



- **The 3rd Procedure of PPLT – Distal Tissue Softening Approach**

The 3rd procedure is for conditions which fail to respond to the first two procedures. This procedure is subdivided into contact mode and noncontact mode ([Ohshiro 2012](#)). The noncontact method is called sweeping. “In noncontact mode, the laser is aimed and held at some distance from the target tissue. In both contact and noncontact modes it is important to keep the probe head at right angles to

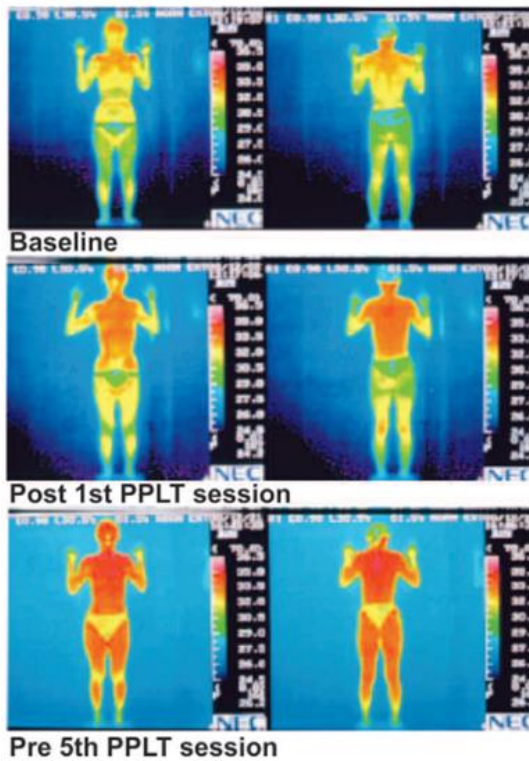


the plane of the target tissue to optimize penetration” (Ohshiro 2012). Please refer to the following article for more information: [Ohshiro 2012](#).

The contact method is subdivided into three application types, depending on the depth of the target tissue. Contact mode minimizes reflection loss from the skin and allows for a higher incident photon density and deeper penetration (Ohshiro 2012). In the world of trying to conceive over 35, especially over 40, I would argue that a lot of us don’t have time to wait to see if the first two procedures will work and should incorporate distal areas (the reproductive organs) immediately.

Research suggests that PPLT improves ailments due to “efficacy of irradiation of the stellate ganglion... thereby activating the descending inhibitory pathway and further enhancing whole-body messaging” (Ohshiro 2012). This image shows the whole body warming in a female being treated with PPLT for infertility. The author states that “the ‘rest and digest’ system, ensures whole body relaxation and removes any sympathetic hypertension caused by the other

component of the autonomous nervous system, the sympathetic ‘fight or flight’ system. With the relaxation of the muscles which is part of parasympathetic dominance, the arterial walls will also relax promoting increased blood flow and oxygenation of the tissues being fed by the vessels. At the same time, hypertensive patients may experience a drop in blood pressure towards normal” (Ohshiro 2012).



Increased blood flow is observed in the carotid arteries following only one session of PPLT. Following one session of PPLT, there was a 63% increase in blood flow seen in the carotid artery of the irradiated side. Interestingly, the unirradiated side saw an even larger increase than the side that had the laser on it! These effects lasted for more than an hour before decreasing back to the baseline reading (Ohshiro 2012).

Image Above: “Sequence of whole body warming illustrated with fine-plate thermography for a female patient with severe infertility undergoing the PPLT approach, comparing baseline pretreatment with the findings after the first treatment and prior to the 5th treatment. Degree of full-body heating is clearly apparent. Left hand images: Front view. Righthand images: Rear view.” (Ohshiro 2012).

The images at right are single photon emission tomography (SPECT) images of a brain. Oshiro compared baseline SPECT images to those taken after one PPLT session in the same patient. After the PPLT, there is a substantial increase in cerebral blood flow throughout the brain (please see images of brain below) ([Ohshiro 2012](#)).

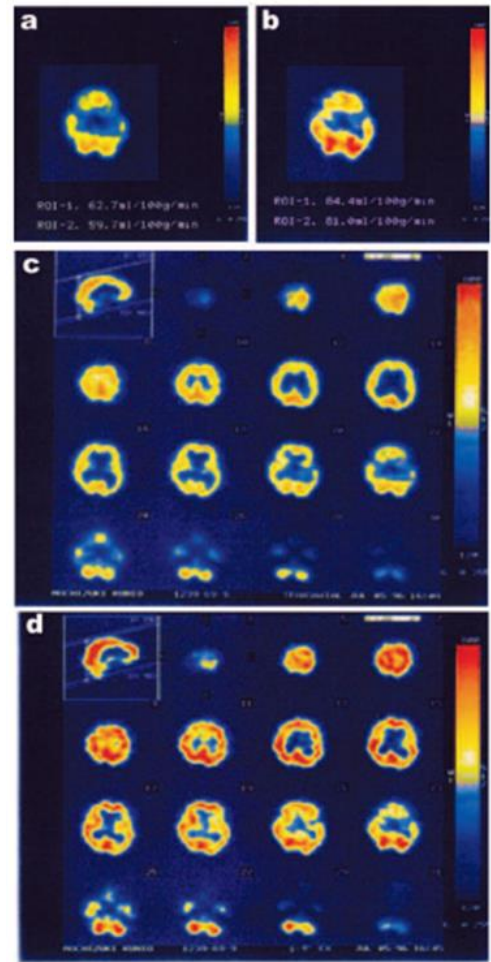


Image at Right: “SPECT images showing increased cerebral blood flow comparing post PPLT images with unirradiated baseline findings. (a, b) Transverse SPECT mages used to calculate increased blood flow in selected regions of interest (ROIs – see also Table 1) of the brain: ROI 1, right basal nuclei; ROI 2, posterior lobe. (c,d) Sagittal (top left) image and a complete series of transverse slices showing universal increased blood flow post-PPLT” ([Ohshiro 2012](#)).