Policy Replaced with LCDs L33445 Effective February 26, 2018

BlueCross BlueShield of Alabama

Name of Blue Advantage Policy:

Pulsed Dye Laser Treatment of Recalcitrant Verrucae

Policy #: 187
Category: Surgery

Latest Review Date: July 2010
Policy Grade: **Effective February 26, 2018 Policy replaced by LCD L33445.**

Background:

Blue Advantage *medical policy does not conflict with Local Coverage Determinations (LCDs), Local Medical Review Policies (LMRPs) or National Coverage Determinations (NCDs) or with coverage provisions in Medicare manuals, instructions or operational policy letters. In order to be covered by Blue Advantage the service shall be reasonable and necessary under Title XVIII of the Social Security Act, Section 1862(a)(1)(A). The service is considered reasonable and necessary if it is determined that the service is:*

1. *Safe and effective;*
2. *Not experimental or investigational*;*
3. *Appropriate, including duration and frequency that is considered appropriate for the service, in terms of whether it is:*
   - *Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member;*
   - *Furnished in a setting appropriate to the patient's medical needs and condition;*
   - *Ordered and furnished by qualified personnel;*
   - *One that meets, but does not exceed, the patient's medical need; and*
   - *At least as beneficial as an existing and available medically appropriate alternative.*

In accordance with Title XVIII of the Social Security Act, Section 1862 (a)(10) cosmetic surgery or expenses incurred in connection with such surgery is not covered except as required for the prompt repair of accidental injury or for improvement of the functioning of a malformed body member.

Routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000 which meet the requirements of the Clinical Trials NCD are considered reasonable and necessary by Medicare. Providers should bill* ***Original Medicare* *for covered services that are related to* ***clinical trials*** *that meet Medicare requirements (Refer to Medicare National Coverage Determinations Manual, Chapter 1, Section 310 and Medicare Claims Processing Manual Chapter 32, Sections 69.0-69.11).*

Description of Procedure or Service:

The flashlamp-pumped pulsed dye laser (PDL) produces short pulses of yellow light at short wavelengths (585-600 nm) to induce selective thermal damage to cutaneous vessels. It has been used to treat vascular lesions including port wine stains, hemangiomas, telangiectasias, hypertrophic scars, and warts. The pulsed dye laser has been used as an alternative to surgical excision or carbon dioxide lasers.

The pulsed-dye laser (585 nm) has been used to treat warts by producing selective photothermolysis of dermal blood vessels. There have been several studies with varied clearance rates of warts. There is some debate that different treatment techniques may be responsible for the variable outcomes. Various authors have suggested that paring of the lesion between treatments, using high fluences with stacked pulses at fast pulse repetition rates, and follow up with shorter treatment intervals may improve response rates. The side effects include transient pain and erytherma and the sites treated usually heal with minimal or no residual scarring.

The U.S. Food and Drug Administration (FDA) has cleared the pulsed-dye laser for use in treatment of port-wine stains, hemangiomas, telangiectasias, hypertrophic scars and warts.

The newest versions of the pulsed dye lasers have rapid pulse repetition rates (one pulse per second), multiple spot sizes (3, 5, 7, and 10 mm), and require dye changes only every 75,000 pulses. Candela Corporation, Wayland, MA, manufactures a flash-lamp pumped PDL (585 nm).

Policy:

Effective for dates of service on or after February 26, 2018:
Refer to LCD L33445.

Effective for dates of service July 1, 2005 and prior to February 26, 2018:
Blue Advantage will treat **pulsed dye laser** as a **covered** benefit for the treatment of recalcitrant verrucae when conventional therapy such as topical chemotherapy, curettage, electrodesiccation, and cryotherapy has failed.

Blue Advantage does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Advantage administers benefits based on the members' contract and medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

Key Points:

There have been many published reports on the use of the pulsed dye laser to treat recalcitrant verrucae. Some of the reports are summarized below.

Taw, et al (1993), reported on the use of the pulsed dye laser (585 nm) to treat recalcitrant warts. The results showed 28 of 39 patients (72%) were cured after an average of 1.68 treatments.

Kauvar, et al (1995), reported on a layer series, 142 patients, also treated with the pulsed dye laser for recalcitrant warts. The results showed an overall response rate of 74% after one treatment and 93% after an average of 2.5 treatments with 3 to 9 months follow up. The response rates were 99% for body and extremity warts, 95% for hand warts, 84% for plantar warts, and 83% for periungual warts.

Jacobson, et al (1997), reported on pulsed dye laser therapy to treat 32 patients, 19 with recalcitrant warts and 13 with no prior treatment. All warts were treated an average of 1.72 times. The results showed that 68% of the recalcitrant warts and 47% of the no prior treatment warts were completely cleared.

Ross, et al (1999), reported on 33 patients treated with pulsed dye laser for recalcitrant warts. The results showed a 48% cure rate, which was lower than previous reports.

Kenton-Smith, et al (1999), reported on 28 patients with recalcitrant and simple viral warts treated with pulsed dye laser. The results showed a cure rate of 92% for recalcitrant warts after an average of 2.1 treatments and 75% for simple warts after an average of 1.6 treatments with a mean follow up of 7.2 months.

Robson, et al (2000), reported on a prospective randomized trial of 40 patients comparing pulsed-dye laser (PDL) to conventional therapy (cryotherapy or cantharidin application) in the treatment of warts. The results showed a cure rate of 70% in the conventional therapy group and 66% in the PDL group (not statistically significant). So, the authors concluded that this data suggests that PDL is probably not superior treatment. However, in a follow-up letter to the editor by Kawar and Geronemus, they suggested that different treatment techniques may account for the relatively poor response rate.

Wu, et al (2003), reviewed the records of 44 patients treated with PDL for viral warts. The results showed a 64% cure rate for all areas treated, and 46% cure rate for recalcitrant warts. Also, 25% of patients complained of severe pain during treatment and 36% reported recurrence of warts in weeks to months following treatment.

Bacelieri and Johnson published an evidence-based review related to the treatment on cutaneous warts. A number of methods of treatments were reviewed including topical salicylic acid, cryotherapy, pulsed dye laser therapy, retinoids, and intralesional immunotherapy. Regarding the use of pulsed dye laser therapy, Bacelieri and Johnson reported that studies have examined the effectiveness of pulsed dye laser therapy after an average of 2-3 treatments and reported overall cure rates of 48% to 93% for warts located at various sites. One study had a 72% overall clearance rate with the highest being 85.7 for periungual warts, and the lowest clearance rate was 50% for plantar warts. Another study review compared pulsed dye laser therapy with cryotherapy and cantharidin. Of the cryotherapy or cantharidin, 70% demonstrated clearance after two treatments, whereas 66% of the patients treated with pulsed dye laser demonstrated

clearance following two treatments. The authors concluded that pulsed dye laser therapy is as effective as conventional therapy.

Key Words:

Pulsed dye laser, verrucae (warts)

Approved by Governing Bodies:

Numerous pulsed dye lasers are FDA approved

Benefit Application:

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

Coding:

CPT:

17000	Destruction (e.g., laser surgery, electrosurgery, cryosurgery, chemosurgery, surgical curettement), premalignant lesions (e.g., actinic keratoses); first lesion
17003	Destruction (e.g., laser surgery, electrosurgery, cryosurgery, chemosurgery, surgical curettement), premalignant lesions (e.g., actinic keratoses); second through 14 lesions, each (list separately in addition to code for first lesion)
17004	Destruction (e.g., laser surgery, electrosurgery, cryosurgery, chemosurgery, surgical curettement), premalignant lesions (e.g., actinic keratoses); 15 or more lesions
17110	Destruction (e.g., laser surgery, electrosurgery, cryosurgery, chemosurgery, surgical curettement), of benign lesions other than skin tags or cutaneous vascular lesions; up to 14 lesions
17111	Destruction (e.g., laser surgery, electrosurgery, cryosurgery, chemosurgery, surgical curettement), of benign lesions other than skin tags or cutaneous vascular lesions; 15 or more lesions

References:

1. Bacelieri R and Johnson SM. Cutaneous warts: An evidence-based approach to therapy. American Family Physician August 2005; 72: 647-652.
2. Cantatore JL and Kriegel DA. Laser surgery: An approach to the pediatric patient, Journal of the American Academy of Dermatology, February 2004, Vol. 50, No. 2.
3. Dover JS, et al. Guidelines of care for laser surgery, Journal of the American Academy of Dermatology, September 1999, Vol. 41, No. 3.
4. Habif: Lasers, Clinical Dermatology, 4th edition, 2004 Mosby, Inc.

5. Hruza GJ. Laser treatment of epidermal and dermal lesions, Dermatologic Clinics, January 2002, Vol. 20, No. 1.
6. Jacobson E. Pulsed dye laser efficacy as initial therapy for warts against recalcitrant verrucae, Cutis, April 1997; 59(4): 206-8.
7. Kauvar AN, et al. Pulsed dye laser treatment of warts, Archives of Family Medicine, December 1995; 4(12): 1035-40.
8. Kauvar AN and Geronemus RG. Pulsed dye laser versus conventional therapy in the treatment of warts, Journal of the American Academy of Dermatology (Letter to the Editor), July 2001, Vol. 45, No. 1.
9. Kenton-Smith J and Tan ST. Pulsed dye laser for viral warts, British Journal of Plastic Surgery, October 1999; 52(7): 554-8.
10. Robson KJ, et al. Pulsed dye laser versus conventional therapy in the treatment of warts: A prospective randomized trial, Journal of the American Academy of Dermatology, August 2000, Vol. 43, No. 2.
11. Robson KJ and Arpey CJ. Reply to the editor, Journal of the American Academy of Dermatology, July 2001, Vol. 45, No. 1.
12. Ross BS, et al. Pulsed dye laser treatment of warts: An update, Dermatologic Surgery, May 1999; 25(5): 377-380.
13. Tan OT, et al. Pulsed dye laser treatment of recalcitrant verrucae: A preliminary report, Lasers in Surgery and Medicine, January 1993; 13(1): 127-137.
14. Tanzi EL, et al. Lasers in dermatology: Four decades of progress, Journal of the American Academy of Dermatology, July 2003, Vol. 49, No. 1.
15. Wu C, et al. Efficacy of pulsed-dye laser for viral warts—An internal audit, Irish Medical Journal, March 2003; 96(3): 80, 82-83.

Policy History:

Adopted for Blue Advantage, March 2005
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Medical Policy Group, July 2006
Medical Policy Group, July 2008
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Medical Policy Group, January 2018
