



INTERNATIONAL SOCIETY OF  
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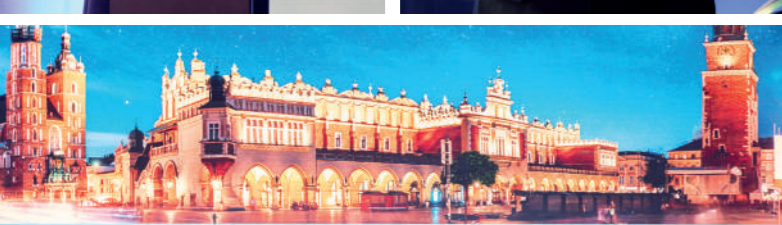


**4TH BIOLITEC LASER SUMMIT  
FOR PROCTOLOGY IN KRAKOW**

# PROCTOCOM 2025 – IN A NUTSHELL



**Technology  
meets Anatomy**



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## DR. AMINE ANTONIN ALAM

Saint Joseph Hospital of Paris – Department of Coloproctology

### Fistula in ano

A fistula-in-ano is an inflammatory tract connecting the anal canal to the perianal skin or the buttock, commonly linked to anorectal abscesses. Symptoms range from mild pain and hygiene problems to severe sepsis, often causing a marked reduction in quality of life. Surgery remains the primary treatment, aiming to drain infection, remove the tract, prevent recurrence, and, if possible, preserve sphincter function. The surgical approach is determined by factors such as cause, location, type, duration, prior interventions, and sphincter integrity.<sup>1</sup> Fistula-in-ano develops from an initial infection of a Hermann and Desfosses gland by digestive bacteria. This gland opens into the anal canal at the level of the crypts of Morgagni near the pectinate line. The resulting intersphincteric suppuration can spread into perianal spaces, forming a collection or secondary opening connected to the primary endoanal opening through a fistulous tract.<sup>2</sup>

In the acute phase, fistula-in-ano presents as an abscess located at the anal margin, perianal skin, ischioanal fossa, or within the anal wall. In the chronic phase, it manifests as intermittent discharge from a secondary skin opening. Over 90% of anorectal fistulas are cryptogenic, originating from infection of the anal crypt glands located near the dentate line. These glands extend through the internal sphincter into the intersphincteric space, and the fistula forms as a tract connecting the resulting gland abscess to the perianal skin or, less commonly, to other pelvic organs.<sup>3</sup> Crohn's disease causes anoperineal fistulas in 15% of patients within 10 years and 20–30% within 20 years, while anovaginal fistulas occur in less than 5% within 10 years. These fistulas may develop before or after Crohn's diagnosis. Unlike cryptoglandular fistulas, Crohn's fistulas result from penetrating inflammation rather than gland infection, requiring multidisciplinary care.<sup>4</sup> Other causes of fistulas include obstetric injury, which can cause anovaginal or rectovaginal fistulas. Radiation proctitis may cause bleeding, rectal pain, and fistula formation. Rarely, rectal foreign bodies can cause mucosal laceration, leading to abscess and fistula development. Infectious diseases such as Chlamydia trachomatis (LGV), gonorrhoea, anorectal tuberculosis, actinomycosis, and perianal manifestations of AIDS can also result

in fistulas. Malignancies, including rare Crohn's fistula transformation and anal squamous cell carcinoma, may cause fistulization as well.<sup>5</sup>

Goodsall's law gives the first topographic description of the course of anal fistulas: posterior fistulas usually have a postero-midline primary opening and follow an arc-shaped course, while anterior fistulas typically have an anterolateral primary opening and a direct course. Park's classification distinguishes four types of fistulas according to their relationship with the external sphincter. Type 1 describes intersphincteric fistulas, which account for 40–60% of cases. These involve a descending fistulous tract related to an anal margin abscess or an ascending tract associated with an intramural abscess. Type 2 refers to transsphincteric fistulas, which account for 20–40% of cases. Type 3 refers to suprasphincteric fistulas, which make up 5–15% of cases. Type 4 refers to extrasphincteric fistulas, which are rare (<5%). The primary opening in these fistulas is non-cryptic. It is important to evaluate for specific underlying causes such as Crohn's disease, infection, or malignancy.<sup>6</sup> The Arnous classification distinguishes four levels of fistula tracts: ascending intersphincteric, suprasphincteric, superior transsphincteric (involving more than 50% of the external sphincter) – these are classified as high fistulas – and inferior transsphincteric (involving less than 50% of the external sphincter).<sup>7</sup> A fistula with an associated secondary tract develops as a complication of the primary tract, typically in high transsphincteric and suprasphincteric fistulas. There are three types of secondary tracts: extension into the intersphincteric (intramural) space, extension into the supralevator space, and horseshoe extension involving contralateral spread of suppuration.<sup>8</sup> Diagnosis of an anal fistula is suspected based on history and physical exam showing pain, purulent drainage, or a perirectal lesion. Confirmation requires identifying internal and external openings connected by a tract, often probed under anesthesia. Imaging is not necessary for simple fistulas but is helpful in complex or recurrent cases. Fistulotomy is the gold standard treatment for anal fistulas, achieving a high healing rate of 93.7%, but a significant portion of

approximately 12.7% of patients experience postoperative incontinence.<sup>9</sup> Sphincter-saving techniques are recommended for patients with pre-operative incontinence, IBS or chronic diarrhea, pre-existing sphincter injuries (obstetrical or surgical), complex or anterior anal fistulas, a history of multiple fistula surgeries, or Crohn's disease to help preserve continence while managing the fistula.<sup>10</sup> Sphincter-saving techniques include "fill in" approaches like fibrin glue, plugs, and stem cells; destruction via laser, radiofrequency, and VAAFT; disconnecting the tract via LIFT as well as obturating the internal orifice via FLAP or Ovesco.

- 1 Williams et al, Colorectal Dis 2007 ; Gurer et al, Am J Surg 2007 ; De Parades et al, Rev Prat 2008
- 2 De Parades et al, Rev Prat 2008
- 3 Eisenhammet et al, Surgical Gyneco Obstetric 1956 ; Park et al, British Medical Journal 1961
- 4 Eglinton et al, Dis Colon Rectum 2012 ; Panés et al, Nat Revue Gastroenterol Hepatol 2017 ; Fathallah et al, HGOD 2024
- 5 Goldberg et al, Surg Clinic North Am 2010 ; Gupta et al, Afr Health Science 2005 ; Coremans et al, Dis Colon Rectum 2005
- 6 Parks A, Br J Surg. 1976
- 7 Arnous J et al, Concours Med 1980 ; Frenkel et al. Dis Colon Rectum 2002
- 8 De Parades et al, Rev Prat 2008
- 9 Litta, Tech Coloproctol 2021
- 10 Jordan, et al. Colorectal Dis 2010



**Over 90% of anorectal fistulas are cryptogenic, originating from infection of the anal crypt glands located near the dentate line.**



## PROF. DR. PETER C. AMBE

Professor of Surgery, Colorectal, Gastrointestinal, Oncological and Minimally Invasive Surgery; Witten/Herdecke University; Clinic for General, Visceral, Vascular, and Thoracic Surgery, Oberwart Clinic; President of ISoLP

### Hydradenitis Suppurativa Laser Management

Hidradenitis suppurativa (HS) is a chronic, recurrent skin condition characterized by the development of painful, inflamed nodules, abscesses, sinus tracts around the armpits, groins, buttocks, underneath the breasts in females and around the scrotum in males. Affected areas can become swollen, tender, and may drain foul-smelling secretions. Over time, the condition can lead to tunnels and scarring.

The exact etiology of HS is not fully understood but is thought to be multifactorial. HS affects about 1–2% of the adult population in the West, with a three times higher prevalence amongst females. Smoking, alcohol consumption and obesity, amongst others have identified as risk factors for HS. The condition usually persists for many years prior to being diagnosed. HS has been shown to negatively affect a person's quality of life and reduce life expectancy. HS may be associated with well-known chronic systematic conditions like inflammatory bowel disease, SAPHO (synovitis, acne, palmoplantar pustulosis, hyperostosis, osteitis) syndrome, Pyoderma gangrenosum, Adamantiades-Beçet disease (ABD), and Spondylarthropathy (SPDA1; SPDA2), and may be complicated by squamous cell carcinoma (SCC).<sup>1</sup>

Hurley's classification represents a widely used staging system for this chronic recurrent condition. The condition may be associated with bacterial colonization and a good correlation has been shown between bacterial species and the stage of the condition, with detection of both aerobic and anaerobic bacteria in Hurley stage III.<sup>2</sup> More recently the IHS4 grading system has widely gained popularity due to its ability to better characterize the inflammatory component of HS. Management typically includes measures to reduce inflammation, prevent flare-ups, and control symptoms. Treatments may involve antibiotics, antihormonal, anti-inflammatory medications and biologics. Lifestyle modifications such as weight management, cessation of smoking, reduction of alcohol

intake and good hygiene may improve the condition. Surgery was usually indicated for complicated cases.

Historically, wide excision and deroofting represented the main surgical options in the management of HS. In the era of minimally invasive surgery, laser surgery is being increasingly adopted for the same indication. Both the CO<sub>2</sub> and Nd:YAG laser have been shown to be effect in the management of HS (each category of evidence 1b and strength of recommendation A).<sup>3</sup> More so, the feasibility of treating acne using a photothermal approach with a mid-IR laser and cryogen cooling has been reported in recent literature.<sup>4</sup> Similar data is available for the use of long-pulse Nd:YAG laser in HS.<sup>5</sup> In a recently published technical paper Prof Ambe's group highlighted the following 7 critical steps to achieve optimal results in HS treatment with 1470nm diode laser with a radial emitting fiber: Drain all collections, minimize tissue damage, protect healthy skin, control risk factors, adopt a multidisciplinary approach, follow up closely, and be patient. The authors see the minimally invasive nature of laser surgery as a strong argument for the use of this technique in the management of chronic recurrent HS.<sup>6</sup>

<sup>1</sup> Nikolakis, Georgios, et al.: Bacterial colonization in hidradenitis suppurativa/ acne inversa: a cross-sectional study of 50 patients and review of the literature. *Acta dermato-venereologica* 97.4 (2017): 493-498.

<sup>2</sup> Nikolakis, Georgios, et al.: Bacterial colonization in hidradenitis suppurativa/ acne inversa: a cross-sectional study of 50 patients and review of the literature. *Acta dermato-venereologica* 97.4 (2017): 493-498.

<sup>3</sup> Gulliver, W, et al.: Evidence-based approach to the treatment of hidradenitis suppurativa/acne inversa, based on the European guidelines for hidradenitis suppurativa; *Rev Endocr Metab Disord*. 2016 Feb 1;17(3):343–351. doi: 10.1007/s11154-016-9328-5

<sup>4</sup> Paithankar, D.J.: Acne treatment with a 1,450 nm wavelength laser and cryogen spray cooling; *Lasers Surg. Med.* 31:106–114, 2002; <https://doi.org/10.1002/lsm.10086>

<sup>5</sup> Tierny, E. et al.: Randomized control trial for the treatment of hidradenitis suppurativa with a neodymium-doped yttrium aluminium garnet laser; *Dermatol Surg.* 2009 Aug;35(8):1188-98. doi: 10.1111/j.1524-4725.2009.01214.x.

<sup>6</sup> Brown, N.K.D. et al.: Minimally invasive management of hidradenitis suppurativa using a 1470 nm diode laser: a step-by-step description of our technique; *BMC Surg.* 2025 Jan 23;25:36. doi: 10.1186/s12893-024-02686-8

## PROF. DR. FENG FAN CHIANG

Taichung Veterans General Hospital, Taiwan



### Getting Laser Started: Five Year Experience at Tazchung Veterans General Hospital

The use of lasers offers many advantages, including excellent energy source, directionality, depth control, and non-contact operation. In contrast, disadvantages of other techniques such as RF/MW, US, and CRYO include poor directionality, necessity of contact, limited treatment volume, poor energy shaping, and uncontrolled penetration. Regarding interaction of wavelength and tissue, the peak absorption of laser in water at 1470 nm with ~2mm thermal damage offers a balance of precision and coagulation. Indications and patient selection for laser treatment typically include patients with grade II and III hemorrhoids, as well as selected fistulas, and pilonidal sinus, while complex disease cases should be avoided.

Laser hemorrhoidoplasty offers precise energy delivery, a non-contact technique, controlled depth and directionality, minimal bleeding with less pain, and is safe to use even in patients on anticoagulants.<sup>1</sup> Practical considerations before laser hemorrhoidoplasty include careful preoperative evaluation to rule out neoplasia, assess anatomical anomalies and symptom correlation (e.g., constipation vs. tenesmus), and differentiate from fissure, fistula, abscess, or other perianal lesions. During

Chiang's five-year experience at the VGHTC from 2021 to 2025 a total of 1,339 cases were treated, involving selective arterial ligation, optimized puncture sites, external excision protocols, as well as cooling and medication strategies. Outcomes include high patient satisfaction, low complication rates, and safety in patients taking anticoagulants. The number of hemorrhoid patients and LHP® treatments at the VGHTC has risen steadily over the past 5 years, while the number of cases treated using conventional methods has declined accordingly. Keys to successful laser treatment include smart training, understanding the technology, seeking mentorship, valuing design, and making wise choices. The clinical impact is significant: indications are evolving, laser treatment is safe, simple, and effective, offering less pain, fewer complications, and faster recovery. Anticoagulants are not a barrier, grade II and III patients are ideal candidates, and 5-year satisfaction rates remain high.

<sup>1</sup> Gallo, G, et al.: Consensus statement of the Italian society of colorectal surgery (SICCR): management and treatment of hemorrhoidal disease; *Tech. Coloproctol.* 2020, 24, 145-164. doi: 10.1007/s10151-020-02149-1; Lohsiriwat, et al.: Outpatient hemorrhoidectomy under perianal anesthetics infiltration; *J. Med. Assoc. Thai.* 2005, 88, 1821-1824; <https://pubmed.ncbi.nlm.nih.gov/16518980/>





## DR. MARTIN KOWALLIK

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### Haemorrhoids and the Vascular Theory

Hemorrhoidal disease is one of the most common benign anorectal conditions, affecting up to 38% of the general population. While rarely life-threatening, it causes substantial discomfort through bleeding, pain, itching, and soiling, resulting in considerable impairment of quality of life and frequent absence from work.

Hemorrhoids correspond to three vascular cushions located within the anal canal at approximately the 3, 7, and 11 o'clock positions (in lithotomy orientation). These cushions consist of a dense vascular plexus that contributes to fine continence and anal sealing. Arterial supply derives mainly from the superior rectal artery (a branch of the inferior mesenteric artery), with collateral input from the middle and inferior rectal arteries. Venous drainage follows two separate systems: internal hemorrhoids drain through the superior rectal vein into the portal circulation, while external hemorrhoids drain via the inferior rectal vein into the systemic venous system. The middle rectal veins form a portosystemic anastomosis, which becomes relevant in portal hypertension. In practice, the theoretical anatomy of distinct vascular channels contrasts with the clinical reality of a complex, interwoven vascular mesh.

Bleeding during or after defecation is the hallmark symptom and may fluctuate in intensity over weeks or months. Other frequent complaints include pruritus ani, perianal eczema, soiling due to impaired fine continence, and a sensation of pressure or foreign body in the anus. Pain is not a constant feature.

Early-stage hemorrhoids (grade I) are detectable only by proctoscopy, whereas prolapsing forms become visible during straining or after defecation. Grade II hemorrhoids spontaneously reduce, grade III require manual reduction, and grade IV remain irreducible. While the diagnosis is primarily clinical, additional investigations such as rectoscopy, colonoscopy, or ultrasound are occasionally needed to exclude differential diagnoses.

The therapeutic goal is not complete excision of hemorrhoidal tissue but rather the restoration of normal

anal canal anatomy and function by reducing the volume of the hemorrhoidal plexus. This approach preserves continence and minimizes postoperative morbidity. Treatment selection depends on disease grade and patient-specific factors. Conservative or minimally invasive options include sclerotherapy and rubber band ligation, which show recurrence rates of approximately 70% and 50%, respectively. More advanced interventions include Doppler-guided hemorrhoidal artery ligation (recurrence ~30%) and surgical excision techniques such as closed Ferguson hemorrhoidectomy, subanodermal Parks procedure, or reconstructive Fansler-Arnold hemorrhoidectomy. Surgical options offer lower long-term recurrence rates (~2–6%) but differ in complexity, healing time, and risk of complications such as infection, flap necrosis, or anal stenosis.

Overall, hemorrhoidal disease is readily manageable, and most patients achieve sustained symptom relief. Success depends heavily on accurate diagnosis, appropriate technique selection, and individualized postoperative management. Regardless of the method chosen, the universal priority for patients remains the same: a rapid, pain-free recovery and restoration of comfort and function.



## DR. KATJA WOLFF

Skin and Laser Medical Center Rhine-Ruhr

### Condylomata and AIN

Dr. Wolff gave a comprehensive overview of human papilloma virus (HPV) biology, epidemiology, clinical manifestations, diagnostic methods, treatment options, and prevention strategies. HPV is a small, non-enveloped, double-stranded DNA virus from the papillomavirus family, with over 200 types identified, and 124 fully characterized.<sup>1</sup> The virus predominantly infects humans through sexual contact, with about 85-90% of the population acquiring HPV during their lifetime. It evades the immune system, causing persistent infections in approximately 10% of cases, potentially progressing to invasive lesions. The highest risk HPV types (16, 18, 31, 33, 35) are oncogenic, while low-risk types (notably 6 and 11) mainly cause genital warts (condylomata).<sup>2</sup> Condylomata are highly contagious, with 65-75% infection transmission rates among partners within weeks. Risk factors for infection and lesion development include immunosuppression, unprotected sex, smoking, and previous sexually transmitted infections.

AIN represents a premalignant condition of the anal mucosa categorized histologically into grades I to III (equivalent to low-grade and high-grade squamous intraepithelial lesions). AIN I involves the lower third of the epithelium and may be self-limiting, whereas AIN II and III exhibit more extensive epithelial involvement and harbor higher cancer risk. Diagnostic tools include high-resolution anoscopy and application of agents like trichloroacetic acid (TCA).

Therapeutic approaches are divided into conservative and surgical options. For condylomata, conservative treatments include topical immunotherapy agents such as Imiquimod (6-26% response), antimetabolic therapies like Podophyllotoxin (6-100% response), and plant-derived catechins (Sinecatechins, 47-59% effectiveness). AIN grades I-II may also be managed conservatively with topical agents and photodynamic therapy, although the latter has limited data and the disease often self-resolves in early stages. Surgical treatments encompass excision, curettage, laser vaporization/coagulation, electrocautery, and cryosurgery. Laser therapy is possible using a diode laser with wavelengths between 800–980 nm, targeting

soft tissue with high water content, causing vaporization while sparing hard tissue, resulting in mild side effects.

HPV vaccination as a preventive measure is recommended, for girls and boys prior to sexual debut (strongly recommended in German guidelines<sup>3</sup>), patients with immunosuppression, and individuals with prior cervical cancer or recurrent genital warts. As far as a global health perspective is concerned, it is anticipated that expanded vaccination efforts will lead to a decreased HPV-related disease burden by 2030.

The presentation emphasized the significance of HPV infection in the pathogenesis of anogenital warts and precancerous lesions, advocates for tailored therapeutic regimens including minimally invasive laser options, and highlights vaccination as a critical tool in reducing HPV-related morbidity.

<sup>1</sup> de Villiers, E.M.: Cross-roads in the classification of papillomaviruses. *Virology*. 2013 Oct;445(1-2):2-10. doi: 10.1016/j.virol.2013.04.023.

<sup>2</sup> Crow J.: HPV: The global burden. *Nature*. 2012 Aug 30;488(7413):S2-3. doi: 10.1038/488S2a.

<sup>3</sup> Chromy, D. et al.: German-Austrian guideline on screening for anal dysplasia and anal carcinoma in people living with HIV; *J Dtsch Dermatol Ges*. 2025 Aug;23(8):1025-1040. doi: 10.1111/ddg.15719



## DR. ANNINA WOLICKI

Consultant in Visceral Surgery, Marien Hospital Witten

### Pilonidal Disease

Pilonidal sinus disease is a chronic inflammatory disorder of the skin and subcutaneous tissue, typically occurring in the natal cleft and characterized by sinus tracts containing hair and debris. The condition primarily affects young adults, especially men between 15 and 45 years, and represents a significant clinical and socioeconomic issue. In Germany alone, about 40,000 surgical procedures are performed annually, exceeding those for inguinal hernia repair. The disease causes prolonged sick leave, frequent recurrences, and a substantial reduction in quality of life.

With a view to etiology and pathogenesis current evidence supports an acquired rather than congenital origin. The disease results from penetration of loose hair fragments into the skin of the intergluteal fold, triggering a foreign-body reaction and chronic inflammation. Microscopic and electron-microscopic studies confirm that hair fragments with sharp, hook-shaped tips can enter the skin and fail to retract.<sup>1</sup>

Risk factors include high axial hair strength during puberty and early adulthood, dense or coarse hair, a deep or steep gluteal cleft, and obesity.<sup>2</sup> Occupational exposure – such as in hairdressers or soldiers (“Jeep disease”) – also increases the risk due to frequent contact with short, sharp hair fragments.<sup>3</sup> Preventive measures like regular cleansing and hair removal around the anal cleft appear beneficial, while poor hygiene has not been proven to play a role.<sup>4</sup>

The estimated incidence is 48 cases per 100,000 population. Although the disease predominantly affects the sacrococcygeal area, similar lesions can occur at other body sites, including the umbilicus, intermammary folds, genital region, and interdigital spaces. Differential diagnoses include anal or Crohn’s fistulas, hidradenitis suppurativa, dermatoses, and psoriasis. Rarely, malignant transformation has been reported after decades of chronic inflammation.

Diagnosis is based on clinical assessment through inspection, palpation, and probing of the sinus tracts. In complex cases, methylene blue staining during

surgery may help visualize the sinus network. Imaging modalities such as MRI or CT are reserved for exceptional diagnostic uncertainties. There is no universally accepted classification or scoring system for pilonidal disease.

Surgical management remains the mainstay of therapy. Traditional procedures involve excision with or without flap reconstruction, often associated with significant postoperative pain, long wound healing, and risk of recurrence. In recent years, minimally invasive laser-based techniques such as SiLaC® (Sinus Laser Ablation of the Cyst) have gained attention. SiLaC® uses a 1470 nm diode laser with circular energy emission to ablate epithelial remnants and granulation tissue within the sinus while sterilizing it. The method is performed under general or spinal anesthesia without the need for prophylactic antibiotics.

During the procedure, all pits and side tracts are identified, hair is removed, and the laser fiber is withdrawn at a rate of 1 mm/s, delivering approximately 120 J/cm. Postoperative care involves outpatient wound checks, showering (no sitz baths), and standard analgesia with NSAIDs or metamizole. Healing generally occurs within six weeks.

A clinical follow-up study of 64 patients treated between 2013 and 2018 demonstrated an overall healing rate of 85.9%, with a median wound healing time of 21 days and a median return to work after eight days. Postoperative pain lasted on average 2.5 days, and recurrence occurred in 14.1% of cases. These results underline the effectiveness of SiLaC® as a minimally invasive, low-morbidity option with high patient satisfaction and rapid recovery.<sup>5</sup>

Potential complications include bleeding, infection, recurrence due to overlooked sinus tracts, or new hair intrusion through scars. Extremely rare cases of carcinoma have been reported in chronic or recurrent disease. Preventive measures focus on reducing hair re-entry through mechanical or chemical depilation; however, German guidelines currently do not recommend routine laser epilation, leaving the decision to individual assessment.<sup>6</sup>

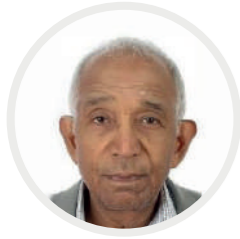
Pilonidal sinus disease is a common and socially impactful condition, primarily affecting young men. Evidence indicates that hair penetration, rather than congenital malformation, is the key etiologic mechanism. SiLaC® laser therapy represents a safe and efficient modern treatment alternative, combining high healing rates and rapid return to normal activities with minimal postoperative discomfort. Proper wound care and preventive hair management are essential to reduce recurrence and maintain long-term success.

- 1 Stelzner F.: Causes of pilonidal sinus and pyoderma fistulans sinifica; *Langenbecks Arch Chir.* 1984;362(2):105-18; doi: 10.1007/BF01254185; Dahl HD, Henrich MH. Light and scanning electron microscopy study of the pathogenesis of pilonidal sinus and anal fistula; *Langenbecks Arch Chir.* 1992;377(2):118-24; doi: 10.1007/BF00184347.
- 2 Akinci OF, Bozer M, Uzunkoy A et al (1999) Incidence and aetiological factors in pilonidal sinus among Turkish soldiers. *Eur J surg* 165:339–342;

- doi: 10.1080/110241599750006875; Balik O, Balik AA, Polat KY et al (2006) The importance of local subcutaneous fat thickness in pilonidal disease; *Dis Colon Rectum* 49:1755–1757; doi: 10.1007/s10350-006-0672-5.
- 3 Doll D, Maier K, Albers K et al (2019) Another common sharp hair fragment disease—barbers' anterior disease (BAD). *Pilonidal Sinus*. IS:1-15 Patey DH, Scarff RW (1948) Pilonidal Sinus in a Barbers Hand with Observations on Postanal Pilonidal SINUS. *Lancet* 252:13-14. [https://doi.org/10.1016/S0140-6736\(48\)91791-7](https://doi.org/10.1016/S0140-6736(48)91791-7); K. Ballas, K. Psarras, S. Rafailidis, H. Konstantinidis, A. Sakadamis, Interdigital pilonidal sinus in a hairdresser, *The Journal of Hand Surgery: British & European Volume*, Volume 31, Issue 3, 2006, Pages 290-291, <https://doi.org/10.1016/j.jhsb.2005.12.002>.
- 4 Favre R, Delacroix P (1964) Apropos of 1,110 cases of Pilonidal disease of Coccy-perineal localization. *Mem Acad Chir* 90:669–676
- 5 Lappe N. (2023) Follow-up-Ergebnisse nach Lasertherapie bei Sinus pilonidalis; <https://hss-opus.ub.ruhr-uni-bochum.de/opus4/frontdoor/deliver/index/docId/10162/file/diss.pdf>
- 6 Armstrong JH, Barcia PJ (1994) Pilonidal sinus disease. The conservative approach. *Arch Surg* 129:914–917 (discussion 917–9); doi: 10.1001/archsurg.1994.01420330028006.; Lieto E, Castellano P, Pinto M et al (2010) Dufourmentel rhomboid flap in the radical Treatment of primary and recurrent sacrococcygeal pilonidal disease; *Dis Colon Rectum* 53:1061–1068; doi: 10.1007/DCR.0b013e3181defd25.

**The disease results from penetration of loose hair fragments into the skin of the intergluteal fold, triggering a foreign-body reaction and chronic inflammation.**





## DR. MAYURA NATHAN

Homerton Anogenital Neoplasia Service (HANS), NHS, UK

### AIN – What do I need for Diagnostics and Management?

Prior to addressing the issue of diagnosis and management, the terms anal precancer, anal intraepithelial neoplasia (AIN) and anal high-grade squamous intraepithelial lesion (HSIL) were clarified. The term “anal precancer” is a more general term that encompasses all preinvasive lesions, including Anal intraepithelial neoplasia (AIN). AIN refers to dysplastic changes in the squamous epithelial cells in the anal canal and perianus, and is classified into grades AIN 1, AIN 2, and AIN 3. However, the distinction between low-grade squamous intraepithelial lesion (LSIL) and high-grade squamous intraepithelial lesion (HSIL) is the more modern nomenclature recommended by the Lower Anogenital Squamous Terminology (LAST) Consensus Initiative. LSIL correlates with AIN-1 or anal condylomata, while HSIL correlates with AIN-2 (p16 +) and AIN-3.<sup>1</sup> LSILs are usually caused by low-risk HPV types (e.g., HPV 6, 11), while HSILs in most instances are associated with high-risk HPV types (e.g., HPV 16, 18, 31, 33). Nathan focuses on HSIL in the following. Nathan refers to a study, indicating that the highest risks for anal cancer are among HIV-positive men who have sex with men (MSM) over 45 years of age and in advanced age (≥60 years). According to the study, a unifying anal cancer risk scale can improve prioritization and standardization in anal cancer prevention/research initiatives.<sup>2</sup>

In the further course of the presentation, Nathan went on by introducing various diagnostic approaches. High resolution anoscopy (HRA) utilizes a magnifying device (colposcope) with adequate lighting to identify HSIL. 5% acetic acid staining is a diagnostic technique to detect HSIL. When 5% acetic acid is applied to the mucosal surface, areas with dysplastic or abnormal cells temporarily turn white (known as acetowhitening). HSIL areas stain more quickly, reach a whitening peak faster, and then fade sooner compared to normal tissue. The method enhances visual detection of HSIL, improving diagnostic accuracy in neoplasia screening.<sup>3</sup> Another approach is iodine staining, identifying HSIL by exploiting the presence of glycogen in squamous epithelial cells.

Normal, glycogen-rich squamous epithelium stains dark brown due to iodine binding to glycogen. In contrast, HSIL areas contain dysplastic (abnormal) cells with reduced or absent glycogen, so they do not take up the iodine stain and appear as unstained or yellowish regions. This contrast helps to visually distinguish HSIL lesions from normal tissue.<sup>4</sup> Biopsy histology is the mainstay in the identification of HSIL. Further, the appearances in vascular patterns during HRA, shows irregular vascular patterns visible on the epithelial surface during colposcopy, often associated with high-grade squamous intraepithelial lesions.<sup>5</sup> Furthermore, abnormal vasculature can help in diagnosing HSIL and early cancer because it reflects pathological blood vessel changes caused by abnormal cell growth. These abnormal vascular patterns, seen during colposcopy or high-resolution anoscopy, help differentiate high-grade lesions (HSIL) or early invasive cancers from normal or low-grade tissue.<sup>6</sup>

Nathan concludes, indicating that treatment of anal precancerous lesions (high-grade squamous intraepithelial neoplasia) prevents anal cancer. An RCT comparing anal HSIL treatment with observation resulted in a 57% reduction in progression to anal cancer with treatment.<sup>7</sup> Treatment methods include ablation, excision, and topical therapies. All treatment methods are available at the Homerton Anogenital Neoplasia Service (HANS).

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**2** Clifford, G.M. et al.: A meta-analysis of anal cancer incidence by risk group: Toward a unified anal cancer risk scale; *Int J Cancer*. 2021 Jan 1;148(1):38–47. doi: 10.1002/ijc.33185.

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**7** Palefsky et al.: Treatment of Anal High-Grade Squamous



## DR. VISHANTHI SHESHA

University Hospitals of Leicester

### Lower Genital Tract Preinvasive Disease: A Combined Approach

The presentation gives a comprehensive overview of managing multifocal preinvasive lesions of the lower genital tract. Multiple patient populations demonstrate elevated risk for multifocal lower genital tract lesions, including those with HPV infection, HIV, immunosuppression following renal or lung transplantation, hematological disorders, and dermatological conditions such as lichen sclerosus. The risk of anal cancer in patients with HPV-related high-grade squamous intraepithelial lesions (HSIL/VIN) is substantially increased to 42 per 100,000 compared to 1–2 per 100,000 in the general population, representing the third most common risk factor after HIV-positive men who have sex with men and transplant recipients.<sup>1</sup> The time interval from HSIL to progression to anal cancer averages 8.9 years, underscoring the importance of long-term surveillance.

Current management paradigms have shifted from the previous surgical approach aimed at disease eradication to anatomy-sparing methods that prioritize preservation of normal tissue, symptom relief, quality of life maintenance, and sexual function. This evolution reflects consensus statements from major European societies (ESGO, ISSVD, ECSVD) advocating for individualized treatment incorporating immunomodulation and laser therapy.<sup>2</sup> Studies indicate for traditional CO<sub>2</sub> laser vaporization recurrence rates of 35–65% on a low evidence level, whereas no randomized trials exist, comparing surgical excision to laser ablation.<sup>3</sup>

The institution has developed extensive experience with diode laser treatment for HSIL, with an ongoing audit evaluating outcomes in 430 women over a ten-year period. Based on preliminary data from 50 cases with five-year follow-up lesion sizes ranged from 1–5 cm including multifocal disease, with an average of two treatments required in the first 15 months for unifocal lesions and three treatments for multifocal disease. The disease-free interval averaged 26 months, with recurrences being small and manageable in outpatient settings. Symptom

control was achieved in 87% of patients after initial treatment, and no progression to invasive cancer occurred in this cohort. There are limitations due to small sample size pending final data analysis.

University Hospitals of Leicester have combined surgical lists to accommodate five patients per session with both colorectal and gynecological surgeons present, utilizing a multimodal approach with diode laser and argon ablation under coloscopic guidance. This model offers multiple advantages: patients avoid repeated general anesthetics every three months, diagnosis and treatment benefit from dual specialist expertise, and significant cost savings are realized through reduced theater time, overhead expenses, anesthesia costs, and bed utilization (£15,150 versus £30,300 per list, with per-procedure costs of £3,030). Follow-up appointments are streamlined with a single specialist based on lesion location, further reducing costs (£900 versus £1,800, with per-appointment costs of £180).

Also, the introduction of outpatient diode laser treatment for vulval and vaginal HSIL has substantially improved service delivery. This approach demonstrates enhanced patient satisfaction, reduced theater attendance, elimination of preoperative assessment appointments, and particular utility for patients with significant medical comorbidities who represent high anesthetic risks. The cost reduction is significant, with outpatient treatment costing £428 compared to £3,030 for inpatient procedures.

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## DR. KATJA WOLFF

Skin and Laser Medical Center Rhine-Ruhr

### 20 Years of Laser use in Condylomata

The presentation provides a comprehensive overview of the use of laser therapy, particularly diode lasers, in the treatment of condylomata acuminata caused by human papillomavirus (HPV). HPV infection is described as the most prevalent sexually transmitted disease worldwide, affecting 85–90% of people during their lifetime. Over 200 types are classified, with the alpha-HPV group – comprising more than 40 types – responsible for infections in the anogenital area. These viruses are divided into high- and low-risk categories. High-risk types (notably HPV 16, 18, 31, 33, 35) are associated with oncogenic potential and are commonly detected in cervical, penile, and anal intraepithelial neoplasia (CIN, PIN, AIN) and in more than 99.7% of cervical cancers. Low-risk types (especially HPV 6 and 11) cause condylomata acuminata, or anogenital warts, which are highly contagious and often transmitted through any form of intimate contact.

Condylomata typically occur in areas traumatized during sexual activity (oral, anal, genital), with risk factors including immunosuppression, unprotected intercourse, smoking, and previous sexually transmitted diseases. According to German S2k guidelines (2018)<sup>1</sup>, clinical diagnosis is standard, though histopathological examination may be required before therapy. In cases of perianal lesions, proctological assessment is recommended. Treatment decisions depend on lesion size, localization, and patient preferences, with both conservative and surgical options available. Testing for other sexually transmitted infections is advised prior to intervention.

There is no specific antiviral treatment for HPV; management focuses on lesion removal and limiting viral spread. Recurrence is common due to subclinical infections. Surgical options include excision, curettage, electrocautery, cryosurgery, and laser therapy. Laser treatment has shown notable benefits compared to conventional methods, offering greater precision, less bleeding, minimal swelling, and reduced postoperative pain. Various laser systems are used – CO<sub>2</sub> and Erbium lasers for ablation, and vascular-targeted Pulsed Dye and Nd:YAG lasers, although these have lower clearance rates (23–52%).

Diode lasers convert electrical energy into light with wavelengths between 800–1940 nm. These lasers vaporize soft tissue with minimal damage to surrounding structures, ensuring highly localized precision. Studies by Reinholz et al.<sup>2</sup> and de Lima Jr et al.<sup>3</sup> demonstrate the diode laser's efficacy and safety, with favorable outcomes in recurrence rates, pain, and aesthetics compared to other modalities. The diode laser's less invasive nature compared to CO<sub>2</sub> lasers further underscores its therapeutic value.

Dr. Wolff's personal experience centers on the biolitec® LEONARDO® Mini Dual device (1470 nm, 12 W). For condylomata, energy settings between 1–3 W per lesion are used, followed by curettage and surface coagulation. Treatments are performed under local or, if necessary, general anesthesia, with strict adherence to infection control measures. Because HPV can be transmitted through surgical smoke, appropriate protective equipment – FFP3 masks and suction devices – is essential to prevent occupational infection.

Post-treatment care includes antiseptic ointments containing polyvidone-iodine or polyhexanide for up to two weeks, normal hygiene through gentle showering, and avoidance of sexual intercourse until complete healing. Follow-up after two weeks is recommended. Mild pain or burning may occur but usually requires no analgesics. Preventive application of sinecatechins (Veregen 10%) for four weeks reduces recurrence risk.

In conclusion, diode laser therapy, especially at low power (1–3 W), offers a highly effective, safe, and repeatable treatment for condylomata acuminata. It provides excellent clinical outcomes with minimal side effects and no vaporization hazards for medical personnel, making it, in Dr. Wolff's assessment, the superior therapeutic option for this condition.

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<sup>3</sup> de Lima Jr, M. M. et al.: Treatment of genital lesions with diode laser vaporization; BMC Urol. 2015 May 8;15:39. doi:10.1186/s12894-015-0033-6.



## DR. RUBEN SCHOUTEN

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### Anal Fissures

The topic of Dr. Schouten's presentation was the treatment of anal fissures, with a focus on traditional and emerging procedures, especially the use of laser (Laser Fissure Procedure, LaFIP) in coloproctology. Anal fissures are a significant source of pain and therapeutic frustration for both patients and physicians, as there are limitations of standard treatments. According to current Dutch guidelines, initial management includes topical Diltiazem, whereas Botulinum toxin is suggested in cases of treatment failure or as a bridge to surgery. Surgical approaches prioritize sphincter-preserving techniques such as fissurectomy, while lateral internal sphincterotomy (LIS) is reserved for severe, refractory cases and preferably avoided in women due to higher risk profiles. The literature indicates that conservative treatments often yield disappointing outcomes, underlying the necessity for alternative strategies to manage chronic and therapy-resistant fissures.

Dr. Schouten highlights the Laser Fissure Procedure (LaFIP) as a promising intervention, demonstrating its potential advantages over conventional electrocautery, as the 1470 nm laser employed with a 400 µm biolitec® bare fiber (5 W – continuous mode) offers non-contact ablation and potentially more controlled effects. The procedure itself involves patient placement in lithotomy position, anal inspection, local anesthetic blockade, introduction of a proctoscope, mechanical removal of granulation tissue, wound preparation, and superficial laser ablation, followed by postoperative pain management, stool regulation, and Diltiazem application. Interviews and follow-up visits are integrated postoperatively for monitoring.

Dr. Schouten's reviews outcomes of his own prospective non-randomized study, which encompasses 150 therapy-refractory cases, primarily managed under local anesthesia with or without sedation.<sup>1</sup> The initial series highlighted the logistical and patient comfort challenges when performed solely under local anesthesia. Transitioning to combined local anesthesia and sedation improved patient experience markedly, with all patients (in this setting) under sedation reporting they "didn't notice anything." This therefore was considered the better approach. Patient characteristics in the example cohort

(n=40) included a mean age of 47 years, mean symptom duration of 48 months, and extensive histories of prior topical and procedural therapies, including lidocaine, at least six weeks of Diltiazem and/or ISDN, biofeedback physiotherapy and one or more rounds of Botox.

Preoperative assessments measured pain (mean NRS 8), blood loss (NRS 4), itching (NRS 2), and soiling (NRS 2), using standardized scoring indices. Postoperative results demonstrated significant and sustained reduction in pain (down to NRS 1 at 2, 8, and 12 months), blood loss, itching, and soiling, with respective scores reducing to zero or near zero. Functional scores and defecation frequency remained stable.

Safety and complication data indicated occasional adverse events, including one abscess (2.5%) and two cases necessitating re-laser intervention (5%). Compared to historical controls, the early results signal good tolerability and efficacy, although current evidence – both internal and in broader literature – remains preliminary and insufficiently robust. The conclusion emphasizes the imperative for continued prospective research, ideally with homogeneous patient populations, and direct comparative studies comparing LaFIP to established treatments such as Diltiazem, Botulinum toxin, LIS, and traditional fissurectomy. The presentation ends with a call for input and collaborative research directions within the ISoLP community.

<sup>1</sup> Schouten, R. et al.: Prospective observational study of the LaFIP procedure in chronic therapy-resistant anal fissure.



## DR. GUIDO WEYAND

Center for Minimally Invasive Proctology and Laser Surgery, Clinic for Visceral, Metabolic and Bariatric Surgery, Klinikum Siegen, Germany

# Laser Management on Chronic Anal Fissures – Lessons Learned Down the Road

Weyand started his presentation by highlighting Siegen Hospital's extensive experience with laser procedures for indications including hemorrhoidal disease, anal fistula, AIN/condyloma, pilonidal sinus, chronic anal fissure, hidradenitis suppurativa, and skin tags, acquired between 2010 and 2023. He then focused on laser treatment of anal fissures, referring to a pilot study in which 25 male and female patients were treated with a carbon dioxide laser, with follow-up within 6 months to 1 year showing that pain, bleeding, and constipation were significantly improved.<sup>1</sup> Referring to a literature review, he then explained that photobiomodulation from laser treatment reduces inflammation in fissure tissue while maintaining cell viability and promoting production of IL-10 and VEGF, supporting angiogenesis. The result is trophic, regenerative, anti-inflammatory, and analgesic effects, with vasodilation, protein synthesis, cell proliferation, and a reduction in prostaglandin levels.<sup>2</sup>

LaFIP uses a bare fiber with a straight, point-focused laser beam for direct surface reactions. The clinical handling is straightforward and generally uneventful using the fiber alone. The system can also incorporate a cannula or a practical ENT-style laser handpiece, offering the added advantage of integrated suction and fiber guidance. The also usable LOMA handpiece on the other hand provides a spread, flat laser application and is an ideal tool for beginners, offering reliable and sustainable clinical performance when treating condylomas, anal intraepithelial neoplasia (AIN), and anal fissures. LaFIP with diode laser is a new, novel, minimally invasive treatment for anal fissures, according to a study in which more than 200 patients experienced immediate improvement and achieved healing of their fissure within one month.<sup>3</sup> Referring to studies Weyand co-authored, laser fissure cleaning is a practicable minimally invasive method in the operative treatment of chronic anal fissure. Short operation time, soon and effective pain reduction are two advantages of this method. Further prospective studies are necessary to compare LFC with conventional operative treatments.<sup>4</sup> Postoperative pain is significantly reduced. Other results also suggest that treating AFs

with laser therapy results in a significant reduction in pain intensity over time without interfering with anal continence.<sup>5</sup> In a study comparing open lateral internal sphincterotomy (LIS) with laser LIS in the treatment of anal fissure, LLIS significantly reduces early postoperative complications such as postoperative pain, bleeding, and hematoma.<sup>6</sup>

Diode laser treatment for chronic anal fissure enables flexible and precise superficial tissue dissolution, functioning as a “fissurectomy without excision.” This minimally invasive procedure is performed on an outpatient basis under laryngeal mask anesthesia and pudendal block with ropivacaine. The applied laser energy is tailored to the lesion and the operator's experience. The technique avoids bleeding and the need for hemostasis, protecting the sphincter and enabling “gutter” formation. Postoperative pain is reduced by avoiding the “cow fence effect” due to the absence of electrical current. Photobiomodulation supports advanced healing. In addition to laser fibers, the LOMA handpiece is suitable for beginners. Extended or combined procedures demonstrate comparable postoperative results and parameters. Measures must be tailored to the individual case, considering the extent of disease and operator experience. Nevertheless, uniform standards and recommendations are essential. Large-scale prospective and multicenter studies are required to establish reliable evidence.

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## DR. VINCENT DE PARADES

Medical Doctor at Groupe Hospitalier Paris Saint Joseph

# Anal Fissure Treatment Options in Modern Era

Parades opens his presentation indicating that several guidelines on management of anal fissures are available.<sup>1</sup> As far as non-specific medical treatment of anal fissures is concerned, creams and suppositories, analgesics, and laxatives are considered first-line treatment according to US-guidelines. Healing rates for patients with symptoms lasting less than one month are higher (100%) than those for symptoms persisting for more than six months (33.3%).<sup>2</sup> With reference to the US-guidelines de Parades highlights, that nonoperative treatment of acute anal fissures is safe and should typically be first-line treatment (strong recommendation based on moderate-quality evidence, 1B). As far as specific medical treatment is concerned, the goal according to US-guidelines is to relieve contracture, which can be achieved with nitrates, calcium channel blockers, or botulinum toxin. As a nitrate, glyceryl trinitrate is available, which is superior to placebo<sup>3</sup> but is associated with headaches as a side effect.<sup>4</sup> As calcium channel blockers, diltiazem or nifedipine can be considered, which are superior to nitrates in that they offer a higher cure rate and are less likely to cause headaches.<sup>5</sup> Compared with topical nitrates, de Parade indicates –referring to the US-guidelines – that calcium channel blockers for chronic anal fissures have similar efficacy, a superior side-effect profile, and can be used as first-line treatment (strong recommendation based on moderate-quality evidence, 1B). Botulinum toxin is as effective as nitrates<sup>6</sup> and diltiazem<sup>7</sup> but is associated with a risk of transient anal incontinence.<sup>8</sup> Referring to Boland et al. de Parades states, treatment should begin with non-specific measures and calcium channel blockers, continue with botulinum toxin in case of failure, and progress to surgery in case of renewed failure.<sup>9</sup> According to US-guidelines, surgery should be performed immediately in cases of infected fissures, severely painful fissures, and suspicious fissures, as well as in cases of failure of medical treatment or recurrence after medical treatment. The techniques available for surgery are lateral internal sphincterotomy (LIS) and fissurectomy ± anoplasty. LIS offers the advantages of being a quick procedure with a simple postoperative course and a rapid return to normal life; however, it also has the disadvantages of not being a standardized technique and carrying a risk of incontinence.<sup>10</sup> The advantages of fissurectomy include the removal of associated lesions, the ability to perform histological analysis, and the absence of risk for incontinence. A disadvantage is

the need for postoperative care.<sup>11</sup> In comparison, LIS and fissurectomy offer similar healing rates but sphincterectomy is connected with a higher risk of incontinence.<sup>12</sup> The US guidelines recommend LIS as the treatment of choice for chronic anal fissures in selected patients without baseline FI (strong recommendation based on high-quality evidence, 1A). According to US-Guidelines anocutaneous flap is a safe surgical alternative for managing chronic anal fissure with a decreased risk of FI compared with LIS and comparable healing rates (weak recommendation based on moderate-quality evidence, 2B). De Parades concludes his presentation by pointing out that in cases where surgery is necessary and there is a risk of contracture and anal incontinence, medical laser technology with laser fissurectomy and laser sphincterolysis offers new possibilities in addition to the established approaches of fissurectomy and lateral sphincterotomy.

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## PROF. DR. PETER C. AMBE

Professor of Surgery, Colorectal, Gastrointestinal, Oncological, and Minimally Invasive Surgery; Witten/Herdecke University; Clinic for General, Visceral, Vascular, and Thoracic Surgery, Oberwart Clinic; President of ISoLP

# The Art of Preservation: Matching Fistula Type to the Technique Without Compromising the Sphincter

Sphincter preserving techniques for closure of complex anal fistulae can be subdivided into open techniques; Rectal advancement Flaps for complex intersphincteric and the LIFT for high transsphincteric fistulae, or closed (minimally invasive) options such as VAAFT and FiLaC®/LAFT. Rectal advancement flaps are differentiated according to flap thickness (mucosa, partial thickness, and full thickness). Full-thickness rectal advancement flaps achieve lower recurrence rates compared to partial or mucosa flaps. However, all flap types are associated with some degree of incontinence, which tends to increase with flap thickness.<sup>1</sup> The LIFT technique can be performed with various modifications without relevant differences in healing rates.

Video-assisted anal fistula treatment (VAAFT) is a minimally invasive, sphincter-saving procedure performed entirely under direct endoluminal vision. The internal fistula opening can be identified in about 82.6% of cases: However, detection of secondary tracts, as possible cause of treatment failure represents a major advantage of this technique. Surgical wounds are minimal, and preliminary results are promising.<sup>2</sup> VAAFT is an effective diagnostic and safe therapeutic option for complex fistula, providing good outcomes with low complication rates. Recurrence after VAAFT may be linked to prior fistula surgery or the method used to close the internal opening.<sup>3</sup>

FiLaC® has been shown in numerous publications as an efficient therapeutic option for perianal fistula disease with high level of safety and acceptable healing rates. This technique can be used to management of both simple and complex fistulae.<sup>4</sup> The strongest argumentation for the use of FiLaC® is the negligible risk of less than 1% postoperative continence disturbance. This is attributed to the tissue preserving nature of the technique. More so, FiLaC® represents a patient-friendly procedure with little or no postoperative pain. An interesting observation with FiLaC® is the higher cumulative healing rate after Re-FiLaC®.

The art of preserving the sphincter during anal fistula repair depends on choosing the right technique for each individual patient. In this context Prof. Ambe cited the treatment algorithm suggested by ESCP (European Society of Coloproctology) anal fistula guidelines from 2023. As far as sphincter preservation procedures are concerned, according to these recommendations FiLaC® can be considered in patients with a complex fistula (very low-level evidence). The very low evidence level is justified by the lack of prospective and randomized studies on FiLaC®.<sup>5</sup> The recently published ISoLP (International Society of Laser Proctology) FiLaC® recommendations now define basic principles and recommendations for performing a standard FiLaC® procedure.<sup>6</sup> Prof. Ambe reported on findings from an unpublished systematic review he co-authored, emphasizing that patients with closure of the internal opening during FiLaC® have an about 10% higher healing rate compared to patients without closure of the internal opening.<sup>7</sup> FiLaC® offers maximum tissue preservation, acceptable healing rates with very low morbidity, easy repeatability with higher healing probability, fistula downgrading, and maximal patient comfort. According to Ambe, achieving optimal treatment outcomes requires balancing the probability of cure with the risk of morbidity.

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**3** Emile, S.H. et al.: A Systematic review and meta-analysis of the efficacy and safety of video-assisted anal fistula treatment (VAAFT); *Surg Endosc.* 2018 Apr;32(4):2084-2093. doi: 10.1007/s00464-017-5905-2.

**4** Frountzas, M. et al.: Could FiLaC be effective in the treatment of anal fistulas? A systematic review of observational studies and proportional meta-analysis; *Colorectal Dis.* 2020 Dec;22(12):1874-1884. doi: 10.1111/codi.15148.

**5** Reza, L.: European Society of Coloproctology: Guidelines for diagnosis and treatment of cryptoglandular anal fistula; *Colorectal Dis.* 2024 Jan;26(1):145-196. doi: 10.1111/codi.16741.

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## DR. NIELS KOMEN

Abdominal-, Pediatric- and Reconstructive Surgery, Antwerp University Hospital

# If Laser Is the Holy Grail, Why Does FiLaC® Fail in Some Cases?

Komen critically analyses the current standing of laser therapy for anal fistula treatment, focusing on reasons for FiLaC® (Fistula Laser Closure) failure under certain conditions. Evidence, according to Z. Mei et al., showed that anal fistula recurrence (AFR) in general was associated with high transsphincteric fistula (RR, 4.77; 95% CI, 3.83 to 5.95), unidentified internal openings (RR, 8.54; 95% CI, 5.29 to 13.80), horseshoe extensions (RR, 1.92; 95% CI, 1.43 to 2.59) and multiple fistula tracts (RR, 4.77; 95% CI, 1.46 to 15.51).<sup>1</sup> Also a Delphi study provides an evidence-based profile of risk factors for AFR in the patient-, surgery- and fistula-related domains from a global perspective.<sup>2</sup> One major reason for surgical failure is a persistent fistula track or remnants of the fistula epithelium which could not be removed during surgery.<sup>3</sup> Against this background, Komen emphasizes that the main reasons for the failure of fistula repair include missed branches (side branches – multiple tracts), insufficient closure of the IFO (high), insufficient drainage of the intersphincteric (IS) space, prior anal surgery, the surgeon himself, as well as patient-related factors.

FiLaC® uses a 1470nm diode laser with a penetration depth of 2–3mm to ablate the fistula epithelium and destroy the tract epithelium. When viewed in general terms, the failure rate for FiLaC® is relatively high compared to other methods.<sup>4</sup> However, with regard to the first relevant factor for AFR – missed branches (side branches, multiple tracts, and wide tracts) – it can be said that FiLaC® has the highest success rate in singular tracts, i.e. in primary, uncomplicated, and low anal fistulas.<sup>5</sup> Regarding insufficient closure of the IFO, i.e. a persistent internal opening as a contributing factor to AFR, the question arises whether FiLaC®, as a technique based on tract sealing, can reliably achieve closure of the internal opening. Komen refers to study results according to which internal fistula opening is not sufficiently closed during LAFT treatment.<sup>6</sup> However, further studies have clarified the ideal indication for LAFT, in that complex anoperineal fistulas with a narrow internal opening are ideal for LAFT and can be successfully treated with less than 400 J.<sup>7</sup> With regard to the factor of inadequate drainage of the IS space, studies show that patients in whom a loose seton was inserted for drainage at the first-stage procedure had a statistically significant higher rate of success (100/142, 70.4% vs. 17/33, 51.5%, respectively; p 0.038).<sup>8</sup> Concerning prior anal surgery, Komen points out, with reference to

relevant studies, that scar tissue can lead to incomplete tract obliteration.<sup>9</sup> He also suggests that the success of treatment can be influenced by the surgeon's training and volume of treatment.<sup>10</sup> With regard to patient-related factors, Komen refers to the ESCP guidelines pointing out that modifiable risk factors for poor wound healing, such as smoking, diabetes, and obesity, should be assessed and discussed with anal fistula patients prior to attempting reparative surgery.<sup>11</sup>

High failure rates persist in fistula repair surgery generally, with laser technology offering no exception currently. However, laser represents a valuable addition to the treatment arsenal due to its ease of use and patient-friendly approach. The key principle remains that one size does not fit all, emphasizing the critical importance of correct indication selection. Laser treatment is suitable for fistulas not amenable to fistulotomy. The ideal setting involves single, narrow fistula tracts (with sufficient drainage via a bridging seton) passing through the sphincter, with closure of the internal fistula opening. It should be a primary treatment, performed by a well-trained surgeon after optimizing patient-related modifiable risk factors.

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**2** Mei, Z. et al.: Risk factors for postoperative recurrence of anal fistula identified by an international, evidence-based Delphi consultation survey of surgical specialists; *Int J Surg.* 2021 Aug;92:106038. doi: 10.1016/j.ijsu.2021.106038.

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**4** Fuschillo, G. et al.: Failure rates and complications of four sphincter-sparing techniques for the treatment of fistula-in-ano: a systematic review and network meta-analysis; *Tech Coloproctol.* 2025 May 20;29(1):116. doi: 10.1007/s10151-025-03152-0.

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**7** Bonnechese, G. et al.: Laser ablation of fistula tract (LAFT) and complex fistula-in-ano: "the ideal indication" is becoming clearer; *Tech Coloproctol.* 2020 Jul;24(7):695-701. doi: 10.1007/s10151-020-02203-y.

**8** Giamundo, P. et al.: Treatment of anal fistula with FiLaC®: results of a 10-year experience with 175 patients; *Tech Coloproctol.* 2021 Aug;25(8):941-948. doi: 10.1007/s10151-021-02461-4.

**9** Mei, Z. et al.; 2019; op. cit.

**10** Simon, E.F.: Hospital operative volume impacts surgical outcomes for patients with T4 rectal cancer following neoadjuvant chemoradiation: a national cancer database analysis; *Surg Endosc.* 2025 Oct;39(10):6903-6914. doi: 10.1007/s00464-025-12064-x.

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## DR. PAOLO GIAMUNDO

MD FEBSQ Coloproctology, FRCSE Hon., Consultant Colorectal Surgeon

### The Dos and Don'ts in the FiLaC® Recommendations

In his presentation on the dos and don'ts in the FiLaC® recommendations, Dr. Paolo Giamundo started with giving an overview of the studies in the systematic literature research the Delphi process for establishing the recommendations was based on. First Giamundo refers to A. Wilhelm, who mentioned FiLaC® as a new technique for sphincter-preserving anal fistula repair using a novel radial emitting laser probe as early as 2011. Wilhelm had applied FiLaC® with flap technique.<sup>1</sup> In 2015, Giamundo et al. published results on the treatment of anal fistulas in 45 patients without the use of sutures or flaps over

the internal opening, achieving a healing rate of 71.1% at a 30-month follow-up.<sup>2</sup> In 2020 Elfeki et. al. published a systematic review and meta-analysis of safety and efficacy of FiLaC® based on 7 studies (454 Patients), reporting 67,3% primary healing rate at 23,5 months follow-up and a mean overall healing rate of 69,7% after a second FiLaC® treatment, as well as minor complications (4%) and less than 1% fecal incontinence (minor soiling).<sup>3</sup> Also in 2020 a meta-analysis by M. Frountzas et al. reported based on 8 studies (476 patients) a pooled success rate of 63% as well as a morbidity of 8% and concluded, that FiLaC®



**FiLaC® shows acceptable long-term results characterized by no damage to sphincters, low morbidity, and excellent patient compliance.**

seems to be an efficient therapeutic option for perianal fistula with an adequate level of safety that preserves quality of life.<sup>4</sup> In 2021 S.O. Adegbola et al. highlighted FiLaC® as a feasible safe and easy to learn technique with no reports of fecal incontinence, benefitting in particular patients with complex or recurrent fistulas where a lay-open cannot be considered due to risks of incontinence.<sup>5</sup> In 2022 a meta-analysis by D. Cao et al. based on 6 Studies and 50 patients indicated a pooled primary healing rate of 68% as well as no major fecal incontinence after FiLaC® which they considered an effective and safe procedure for patients with fistulizing Crohn's disease.<sup>6</sup> According to a multicenter study by T.C. Sluckin et al. (2022) FiLaC® treatment of high anorectal fistulas is not inferior to Mucosal advancement Flaps and LIFT, making it a worthwhile treatment option for high cryptoglandular fistulas.<sup>7</sup> In 2021 Giamundo himself and M. de Angelis published results of 10-year experience with FiLaC® anal fistula treatment based of 175 patients, indicating a primary success rate of 66,8% and a secondary success rate of 73,7%, whereas patients with a seton inserted first-stage had a statistically significant higher rate of success (70.4% vs. 51.5%).<sup>8</sup> In 2020 Giamundo emphasized, that it is difficult to compare the results, as they refer to different fistulas with different lengths and sizes as well as variations in the procedure.<sup>9</sup> Against this backdrop, the FiLaC® Recommendation Development Group was initiated to establish in a Delphi process recommendations with the aim to define some basic principles for performing a standard FiLaC® procedure.<sup>10</sup> Giamundo then went through the recommendations, the essential of which include the following: Indications for FiLaC® include cryptoglandular fistulas with a risk of postoperative continence impairment, Crohn's fistulas, and fistulas in female patients (recommendation **R6**). Furthermore, FiLaC® is one of the sphincter-preserving treatment options for patients with complex fistulas and is therefore a first-line therapy; FiLaC® is an option for selected patients with simple fistulas if there are risk factors for postoperative continence disorders (**R8**). FiLaC® should be performed as a stand-alone procedure (**R16**) with a wavelength of

1470nm (**R2**) at 12 watts (**R3**) with a ring-shaped (360°) emitting fiber (**R4**), retracting the fiber at 1mm/s (**R20**). The procedure can be repeated if necessary (**R24**). The recommendations cover all aspects of the FiLaC® procedure. Giamundo concluded his presentation by noting that FiLaC® shows acceptable long-term results characterized by no damage to sphincters, low morbidity, and excellent patient compliance. As most evidence comes from small series and single-center experiences, he emphasized the urgent need for multicenter randomized trials, potentially including immunohistochemical studies. Finally, he highlighted Video-Assisted FiLaC® as a promising new option for treating difficult cases.

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## PROF. DR. ZHE CUI

Head of Faculty at Renji Hospital

### Predictive Factors for Favorable Outcomes of FiLaC® in Perianal Fistulizing Crohn's Disease (pfCD)

Prof. Zhe Cui began his presentation with some notes on the epidemiology of pfCD, according to which Asians are affected more frequently than non-Asians and adolescents more than other age groups. This increasingly common disease poses a challenge for medicine and represents a considerable social burden for those affected and their families.

Simple fistulas are low, superficial fistulous tracts located between or at the end of the inferior sphincters. They typically have a single external opening and are not associated with pain or fluctuation, which would suggest a perianal abscess. Simple fistulas do not involve rectovaginal fistulas or anorectal strictures, indicating a less complex clinical presentation. Complex fistulas are high, located between or through the high sphincter or at the beginning of the upper sphincter. They have multiple external openings and may cause pain or fluctuation, which suggests a perianal abscess. Complex fistulas can involve rectovaginal fistulas and anorectal strictures, indicating a more complicated condition. 70% to 80% of people affected by fistulas suffer from complex fistulas. Drugs and surgery are considered the optimal solution, although the various biologics (IFX, ADZ, VDZ, UST) only achieved an overall cure rate of less than 50%, with recurrence rates above 30%. During the active phase of the disease, the focus is primarily on seton drainage, infection control, and medication. Remission, on the other hand, is definitely achieved through surgery. There are various methods available for this end. In the following, Cui focuses on FiLaC®. The 360° ring light catheter has both hemostasis and coagulation functions, ablating the epithelial lining of the fistula and causing the fistula to contract. Advantages of FiLaC® include minimally invasive and simple surgery, minimal damage to the anal sphincter, no risk of incontinence, and the possibility for repeat treatments if necessary.

Cui refers to a study he co-authored, indicating a pooled primary healing rate of 68% suggesting FiLaC® as an effective and safe procedure for pfCD patients.<sup>1</sup> A slow

fiber movement speed of ~1 mm/s is recommended for the standard procedure, and closure of the inner opening was opted for. Another Study, which refers to, retrospectively analyzed data from patients with complex pfCD who underwent FiLaC® during deep remission of Crohn's disease between January 2019 and December 2020 and confirms 69.4% fistula healing, 24.5% recurrence as well as significant improvement of the Wexner score.<sup>2</sup> During the 5th meeting of the FiLaC® RDG Group on May 29th, 2024, teams were formed focusing on laser setting and dosage, preoperative work-up, surgery/anesthesia, and postoperative wound care and follow-up. In this context, Cui turns to the relevance of fistula volume. As he points out, referring to a study he co-authored, a total fistula volume (TFV) of > 4.81cm<sup>3</sup> is associated with a high recurrence and low healing rate, indicating there is a maximum inner diameter feasible for FiLaC® (ROC sensitivity 61.1%, specificity 83.9%), making TFV an effective predictor of long-term outcomes in patients with complex pfCD following FiLaC®.<sup>3</sup> Considering a non-surgical perspective and with reference to the consensus of drug therapy for inflammatory bowel disease (IBD), focusing on timing of initial medication, optimization of drug dosing, monitoring for drug antibodies and adjusting medication cycle and dosage, Cui emphasizes, that in the pfCD context local drug concentrations are of special importance.<sup>4</sup> Cui then focuses on predictors for pfCD recurrence. Neutrophil extracellular traps exist in fistulas associated with unhealed pfCD, suggesting their prognostic role for outcomes of pfCD FiLaC® treatment.<sup>5</sup> Further studies revealed unique microbial and transcriptomic signatures associated with NETs in pfCD, highlighting their profound influence on clinical outcomes.<sup>6</sup> According to Cui, further to date unpublished research is currently underway investigating anal fistula in Crohn's disease.

- 1 D. Cao et al.: Efficacy and safety of FiLaC for perianal fistulizing Crohn's disease: a systematic review and meta-analysis; Tech Coloproctol. 2022 Oct;26(10):775-781. doi: 10.1007/s10151-022-02682-1.
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**Another Study, which refers to a study indicating a pooled primary healing rate of 68%, suggesting FiLaC® as an effective and safe procedure for pfCD patients.**

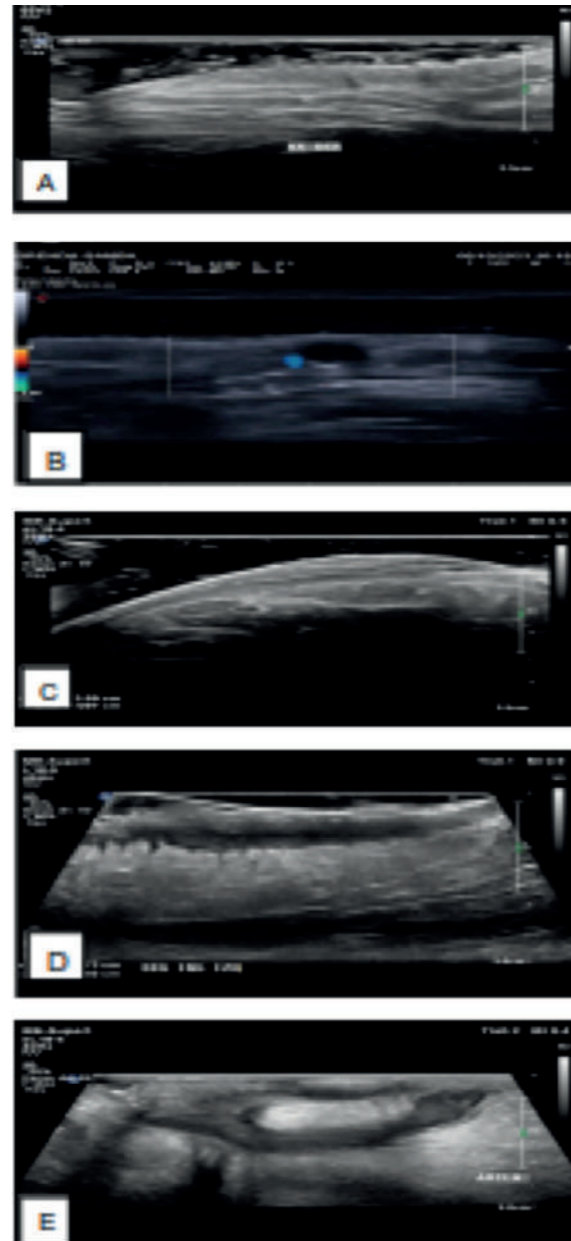


## DR. JUAN DIEGO PINA

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### Hidradenitis Suppurativa

Management of hidradenitis suppurativa is frequently challenging and requires a tailored, patient-centered strategy that integrates both medical and surgical treatment options. A number of promising new therapies, such as antibodies, nanobodies, small molecules, and hormonal treatments, are currently under clinical investigation and have the potential to expand the treatment options available for HS.<sup>1</sup> With reference to the North American guidelines for the clinical treatment of hidradenitis suppurativa, Pina highlights the following general considerations: Surgery may be necessary in cases of refractory HS; surgery should not be performed in isolation; alternatives should be discussed with patients; and treatment of lesions should be individualized.<sup>2</sup> Recurrence rates following surgical treatment of HS vary widely, ranging from 0% to 38, with wide excision and flap-based reconstruction being associated with lower postoperative HS recurrence rates, although this must be balanced against the potentially higher morbidity of extensive procedures.<sup>3</sup> Of the various treatment options for HS, Pina focuses on laser therapy, highlighting initial results of the FiLaC<sup>®</sup> technique in the management of hidradenitis suppurativa based on a preliminary series of cases. The ultrasound images illustrate elementary HS lesions. Figure A shows skin thickening and follicular dilation. Figure B depicts a pseudocystic dermal image accompanied by skin thickening. Figure C illustrates a dermal fistulous tract containing a hair element, visible as a central hyperechoic linear image. Figure D presents interconnected dermo-hypodermic fistulous tracts with pseudopods observable at the hypodermis level. Figure E displays multiple interconnected dermal-hypodermic fistulous tracts associated with marked edema of the underlying subcutaneous cellular tissue. Pina points out that patient satisfaction after FiLaC<sup>®</sup> treatment was significantly higher and the pain score significantly lower than with conventional treatment methods.



<sup>1</sup> Ocker, L. et al.: Current Medical and Surgical Treatment of Hidradenitis Suppurativa-A Comprehensive Review; J Clin Med. 2022 Dec 6;11(23):7240. doi: 10.3390/jcm11237240.

<sup>2</sup> Alikhan, A. et al.: North American clinical management guidelines for hidradenitis suppurativa: A publication from the United States and Canadian Hidradenitis Suppurativa Foundations: Part I: Diagnosis, evaluation, and the use of complementary and procedural management; J Am Acad Dermatol. 2019 Jul;81(1):76-90. doi: 10.1016/j.jaad.2019.02.067.

<sup>3</sup> Riddle, A.: Current Surgical Management of Hidradenitis Suppurativa: A Systematic Review and Meta-Analysis; Dermatol Surg. 2021 Mar 1;47(3):349-354. doi: 10.1097/DSS.0000000000002892.



## DR. RUBEN SCHOUTEN

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### HiLaC Treatment of Hidradenitis Suppurativa in the axilla

Laser treatment of hidradenitis suppurativa is a minimally invasive alternative to more extensive excision surgeries. The goal is to effectively treat affected fistula tracts while minimizing tissue damage and functional impairment.

Patients with hidradenitis suppurativa typically start treatment under dermatologists with medical therapies. We often encounter cases where conventional medical treatments – such as creams, antibiotics, laser hair removal, and advanced biologics like Humira – fail to produce enough improvement, as illustrated by a patient presenting with advanced hidradenitis suppurativa in the armpit, marked by large, affected areas with extensive scarring. In cases like this, surgical interventions like deroofing or wide excision are considered. In the example of our patient, both options would involve large operations with prolonged wound healing of several months as well as potential postoperative functional limitations of the arm due to wound contraction.

Instead, a more subtle and less invasive laser-based procedure is chosen. This technique involves creating only small incisions to access the fistula tracts. Local anesthesia is administered, and careful infiltration is done to separate the skin from the fistula to prevent skin damage during

laser application. The laser fiber in this case is gently inserted and used to treat the fistula tract(s), aiming for tissue shrinking and closure around the fiber. The method is tissue sparing compared to more aggressive surgeries, focusing on minimizing trauma and preserving the range of motion of the arm by avoiding contraction.

The minimally invasive laser technique offers reduced recovery time and lower risk of complications while at the same time targeting the diseased sinus tracts more precisely. Laser serves as a valuable alternative to large excisions in managing difficult hidradenitis suppurativa cases, allowing treatment through small openings, local anesthesia, and precise laser application to the fistulae with the goal of effective healing and reduced morbidity.





## DR. KATRIN A. SALVA

Consultant Dermatologist, MVZ Delfiderma Bochum-Wattenscheid

# Acne Inversa / Hidradenitis Suppurativa – The Dermatologist’s Perspective

Hidradenitis suppurativa (HS), is a chronic inflammatory skin disorder with systemic comorbidities, typically affecting young adults (average onset at 23 years). Its exact pathogenesis remains unclear, but the condition involves inflammatory dilation and rupture of terminal hair follicles, leading to cytokine-driven chronic inflammation, sinus formation, and scarring. Unlike acne, HS does not primarily involve sebaceous glands and responds poorly to retinoids.

The disease results from a multifactorial interaction of genetic, immunological, and environmental factors. Aberrant perifollicular immune activation leads to elevated proinflammatory cytokines (TNF- $\alpha$ , IL-1, IL-17), follicular occlusion, and hyperkeratosis. Genetic predisposition accounts for familial clustering ( $\approx 30\%$ ), with  $\gamma$ -secretase mutations implicated in follicular dysfunction. Key risk factors include smoking (90%) and overweight (50%). Mechanical friction triggers damage-associated molecular patterns (DAMPs), perpetuating inflammation and fibrosis.

Diagnosis is primarily clinical, based on the presence of typical lesions (pustules, nodules, abscesses), localization in intertriginous areas, and chronic inflammation.<sup>1</sup> Secondary indicators include positive family history and elevated inflammatory markers, with two disease phenotypes – active (inflammatory) and inactive (scarred). Severity is graded by the Hurley scale (stages I–III, based on scarring and sinus formation)<sup>2</sup> and the IHS4 score, which quantifies inflammatory activity and guides pharmacologic treatment decisions.<sup>3</sup>

HS imposes a heavy psychosocial and systemic burden. Comorbidities include metabolic syndrome (40–50%), diabetes (10–30%), polycystic ovary syndrome (9–14%), spondylarthropathy (2–28%), psychiatric disorders (5–36%), and inflammatory bowel disease (1–13%). The Dermatology Life Quality Index shows HS as the most life-impairing chronic skin condition, linked to depression, isolation, and reduced life expectancy. Pain, chronic wounds, odour, and disability reinforce a cycle of shame and social withdrawal.

Treatment is stepwise and multidisciplinary. Lifestyle modification is foundational: smoking cessation, weight reduction, antiseptic hygiene, and avoiding tight clothing. First-line therapy relies on antibiotics such as topical clindamycin or systemic tetracyclines (e.g., doxycycline), combining antimicrobial and anti-inflammatory effects. If ineffective, combination therapy with clindamycin and rifampicin is used for up to 12 weeks.

In moderate to severe HS, biologics have revolutionized management. Adalimumab (approved 2015) targets TNF- $\alpha$ , achieving a  $\geq 50\%$  lesion reduction (HiSCR50) in over 40% of patients by week 12. Secukinumab (approved 2023) inhibits IL-17, producing similar improvements and sustained remission in most patients after one year.<sup>4</sup> Bimekizumab (approved 2024) blocks both IL-17A and IL-17F, yielding up to 80% HiSCR50 and 30% complete response (HiSCR100) after 48 weeks. These agents form the pharmacological core of moderate and severe disease management.

Surgical approaches are reserved for irreversible tissue damage. Options include incision and derroofing of superficial tracts, STEEP (skin-tissue-sparing excision with electrosurgical peeling), and radical excision with grafting for extensive lesions. Increasing attention is given to energy-based devices (EBDs) – lasers, intense pulsed light, and LEDs – for their antibacterial, anti-inflammatory, and ablative properties. They can be applied at any disease stage and are less invasive than conventional surgery.<sup>5</sup>

Therapeutic strategies depend on disease activity. Active inflammatory HS requires systemic antibiotics or biologics, often as “downstaging” before surgery or laser therapy, while inactive scarring HS emphasizes surgical and laser-assisted removal of damaged tissue. Biologics do not contraindicate subsequent procedures and may enhance healing outcomes.

Given HS’s cutaneous, systemic, and psychosocial complexity, effective management demands a multidisciplinary team including dermatologists, surgeons, primary care physicians, psychiatrists, wound-

care specialists, and nutritionists. The disease remains underdiagnosed, with an average diagnostic delay of 7–10 years and an estimated prevalence up to 2%. Greater awareness among healthcare professionals and coordinated patient education are essential.

Dr. Salva concludes that combining biologics with laser or surgical methods – preceded by antibiotic preparation – represents the new gold standard for HS treatment. According to the current guidelines, terminal hair removal by laser or IPL is recommended irrespective of disease activity, as a causal measure addressing follicular inflammation at its origin. A collaborative, empathetic,

and interdisciplinary approach is crucial to reducing diagnostic delay and improving patient outcomes.

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**Combining biologics with laser or surgical methods – preceded by antibiotic preparation – represents the new gold standard for HS treatment.**





## DR. MARTIN KOWALLIK

Magen Darm Zentrum Wiener Platz Köln, FASCRS

### Vascular pattern following LHP® vs. healthy patients

LHP® is a minimally invasive procedure for treating enlarged internal hemorrhoids, mainly Grades II–III. It is usually performed under regional or general anesthesia and uses the targeted energy of a diode laser. Instead of surgically removing the hemorrhoids (as in Milligan-Morgan), the enlarged vascular cushions are coagulated from the inside. A laser fiber is inserted through a small skin puncture into the hemorrhoidal tissue. The laser energy (most commonly wavelength 1470 nm) coagulates the vascular tissue, reducing blood flow and causing the hemorrhoid to shrink. The hemorrhoid is localized under direct vision with a proctoscope, and a small incision in the perianal region is made at the site of the nodule to avoid large wounds. A radially emitting laser fiber is then inserted into the tissue, and energy is delivered in controlled pulses along the axis of the hemorrhoidal tissue. The nodule shrinks intraoperatively and continuously further regresses over the following weeks.

The advantages of Laser Hemorrhoidoplasty (LHP®) include no large open wounds, usually less postoperative pain, shorter healing time, and minimal risk to the sphincter muscle. The recovery period is short, with good local hygiene, pain control if needed, and follow-up examination after a few weeks. Limitations are that it is not suitable for very large, severely prolapsed Grade IV hemorrhoids, has recurrence risk if risk factors persist, and outcomes depend on proper indication and surgical expertise. Kowallik refers to study results confirming that for surgical treatment of 2nd and 3rd grade hemorrhoids, using a 1940nm diode laser with proper technical execution and optimal energy selection allows achieving good clinical outcomes. The treatment minimizes pain, does not significantly impact quality of life in the early postoperative period, and enables a faster return to work. Laser Hemorrhoidoplasty is a highly effective treatment for stage 2 and 3 hemorrhoids and enables outpatient management.<sup>1</sup>

Kowallik objectively evaluated the treatment efficacy using three-dimensional ultrasound imaging. Optimizing color Doppler imaging involves balancing gain and

pulse repetition frequency (PRF). Gain controls signal amplification: too low causes weak or absent color, too high causes color spilling and noise. PRF sets the ultrasound pulse rate: high PRF detects faster flows but misses slow ones, low PRF detects slow flows but risks aliasing when velocities exceed the Nyquist limit. Adjusting these parameters correctly is key for accurate blood flow visualization. Three patients were randomly selected and proctological examination, proctoscopy / rectoscopy as well as ultrasound both before and after the procedure were performed. The treatment in these cases was performed with a LEONARDO® Mini 1470nm. The results can be summarized to the effect that three-dimensional ultrasound enables easy imaging of hemorrhoids and their blood flow, allowing for more accurate diagnosis and localization. Correct device settings are crucial. Comparing perfusion images before and after treatment reveals an immediate reduction in hemorrhoid blood flow.

<sup>1</sup> Frolov, S.A. et al.: The Opportunity of Using Diode Laser with the Length of 1940 nm in the Treatment of Hemorrhoids; Russian Journal of Gastroenterology, Hepatology, Coloproctology. 2022;32(2):63–72. doi: 10.22416/1382-4376-2022-32-2-63-72; <https://pdfs.semanticscholar.org/460c/cc0ec40b58c02dd1711269a1ad17f34a35a9.pdf>



## DR. MOHAMED MAGDY ELNAGAR

Consultant of coloproctology,  
CEO and founder Hemocure clinic



### Enhanced Energy Delivery with REVO LHP® Enables Treatment of Large Hemorrhoids

Dr. Magdy was describing his first experience with the novel LHP® Revo fiber expanding to treatment of 4th degree hemorrhoids LHP® REVO enables effective treatment of large hemorrhoids through advanced energy distribution, eliminating the need for traditional methods such as mucopexy, HAL, or excision with their associated drawbacks. This new approach enhances patient comfort and accelerates postoperative recovery while minimizing complications such as bleeding and infection, resulting in safer and more efficient management of large hemorrhoids. Standard LHP® offers reduced pain and faster recovery compared to excision, making it a preferred option. However, its efficacy decreases in grade IV and complex hemorrhoids, with higher risks of bleeding and intraoperative hematoma.

The REVO fiber's fixed-in-position-canula connection improves stability and control, allowing direct access to the pedicle and feeding artery for precise energy delivery and immediate hemorrhoid shrinkage. LHP® REVO operates at 8 W with a three-second pulse mode, optimizing energy distribution and precision. Delivering 250–400J per column, the device enables tailored energy delivery that preserves mucosal integrity and selectively coagulates the venous plexus, reducing pain and accelerating recovery. In Dr. Magdy's institution REVO technique involves bowel preparation, anesthesia ranging from general to local with sedation, and lithotomy positioning for optimal access. The catheter is introduced into each cushion and advanced to the pedicle or beyond, followed by cooling and compression, enabling same-day discharge and high patient satisfaction.

Standard LHP® fiber carbonizes at 95 joules, increasing tissue damage and reducing treatment efficacy. In contrast, REVO fiber carbonizes at 144 joules, providing enhanced stability and energy distribution. This improvement enables more effective procedures and lowers the risk of tissue damage, making REVO fiber preferable for larger hemorrhoids. Standard fiber creates a 35ml coagulation zone at 8W with 4 pulses, limiting effective coverage in larger hemorrhoid treatments. By

comparison, REVO fiber achieves a 60 ml coagulation zone at the same settings, indicating superior energy distribution and more effective treatment with less energy required.

The average energy per pile during the REVO procedure was 182 joules, which contributed to a smooth recovery process. There were no complications noted during or after the surgery, indicating a high level of safety in the procedure. Post-operative pain levels were generally mild to moderate and were effectively managed with analgesics, including Paracetamol and NSAIDs, highlighting the comfort of the REVO procedure. Despite the overall satisfaction, two patients reported dissatisfaction due to persistent skin tags, indicating an area for further improvement in post-operative care.

The REVO fiber significantly enhances the treatment of larger hemorrhoids by utilizing less energy while ensuring improved distribution of that energy. This advancement leads to better outcomes with minimal complications, allowing for effective procedures that prioritize patient comfort and safety. The REVO fiber distributes energy more efficiently during procedures, making it safer for patients with larger hemorrhoids. With a carbonization threshold of 144 joules, the REVO fiber significantly reduces the risk of carbonization compared to standard fibers, enhancing overall treatment safety. The REVO fiber's design and functionality help in preventing intraoperative hematomas and bleeding, leading to a smoother post-operative recovery for patients.



## DR. TOMAS POSKUS

M.D., PhD, FEBS (Professor of surgery, Vilnius University, Vilnius, Lithuania)  
Head, Centre of Abdominal and Oncosurgery, Vilnius University Hospital  
Santaros Klinikos)

### Long-term Results of Laser Hemorrhoidoplasty (LHP®)

Poskus begins his presentation with a brief overview of methods for treating hemorrhoids, including rubber band ligation (RBL), hemorrhoidal artery ligation (HAL), traditional excision, and stapler hemorrhoidectomy. When comparing HAL and RBL, RBL proves to be the technique of choice according to Poskus, given a recurrence rate of 29% after one year for both procedures and the fact that HAL is initially more painful and also significantly more expensive.<sup>1</sup> When comparing traditional excision with stapler surgery, traditional excision is the technique of choice, as it has been shown that although pain is initially less with stapler surgery, the time to return to normal activity is similar for both procedures, and traditional surgery additionally offers advantages in terms of effectiveness, costs, quality of life, preservation of continence, and tenesmus.<sup>2</sup> The first studies on laser treatment of hemorrhoids have been available since 2002. Poskus refers, i.a., to a study from 2010, according to which only 5.8% of the patients examined during the observation period of 6 months to 3 years postoperatively showed a recurrence of hemorrhoidal prolapse.<sup>3</sup> By now, the LHP® Recommendations have been published, stating that the main indications for LHP® are grade 2 and 3 internal hemorrhoids, although grade 4 internal hemorrhoids have also been treated, and according to which mucopexy with or without a Doppler can be added.<sup>4</sup> Contraindications include acute inflammation, abscesses, proctitis, and fistulas. As for the question of how many hemorrhoids should be treated, pathological hemorrhoidal cushions should be managed, with circumferential treatment being preferable. As for whether skin tags should be removed, although 28 to 53% of LHP® surgeons remove skin tags, according to the recommendations, laser treatment of skin tags and external hemorrhoids should not represent an elementary aspect of the standard LHP® procedure, as this can lead to increased pain, longer healing time, and the risk of fistula formation. Recommended laser settings are 12–15W per pulse (1.2 s) for 980nm wavelength and 8–12W per pulse (3 s) for 1470nm. As for the insertion of the laser, a small incision is made in the anoderm using a blade, electrocautery, or the laser probe itself. The probe is carefully advanced via palpation and visual control using the indicator light and energy is applied. For treatment

pulses, apply 2 pulses about 0.5–1cm above the dentate line, 3 pulses at the dentate line level, and 3 pulses below it. There is a clear correlation between the amount of energy applied and the level of pain experienced. For coagulation Poskus recommends 8W 3-second application of the 1470nm diode laser resulting in a coagulation area of approximately 4mm; further coagulation should be initiated approximately 5mm from the first one.<sup>5</sup> Cooling can be applied during the LHP® procedure, while prolonged local compression afterward can be omitted. Poskus and his team work with a laser with a wavelength of 1470 nm and a power of 8 W with 3-second pulses, delivering 200 to 300 J of energy per hemorrhoid. Referring to a study he co-authored Poskus indicates that laser hemorrhoidoplasty is a safe, minimally invasive option for hemorrhoids, more effective than MP and less effective than EH. Patients evaluate LHP® better than the other two.<sup>6</sup> Also, LH offers more favorable short-term clinical outcomes than conventional hemorrhoidectomy, with reduced morbidity and pain and earlier return to work or daily activities. Medium-term symptom recurrence at 12 months was similar.<sup>7</sup> Poskus concludes that LHP® is a safe and minimally invasive technique ideally suited for treating internal hemorrhoids.

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**4** LHP Recommendation Development Group: Best clinical practice recommendations for the management of symptomatic hemorrhoids via laser hemorrhoidoplasty: the LHP recommendations; *Tech Coloproctol*. 2024 Nov 23;29(1):2. doi: 10.1007/s10151-024-03022-1.

**5** Danys, D. et al.: 8 W 3-second application of the 1470nm diode laser results in coagulation area approximately 4 mm, and further coagulation should be initiated approximately 5 mm from the first one. *Open Med (Wars)*. 2020 Mar 8;15:185-189. doi: 10.1515/med-2020-0027.

**6** Poskus, T. et al.: Results of the double-blind randomized controlled trial comparing laser hemorrhoidoplasty with sutured mucopexy and excisional hemorrhoidectomy; *Int J Colorectal Dis*. 2020 Mar;35(3):481-490. doi: 10.1007/s00384-019-03460-6.

**7** Wee, I.J.Y., et al.: Laser hemorrhoidoplasty versus conventional hemorrhoidectomy for grade II/III hemorrhoids: a systematic review

## DR. GEORGIOS K. GEORGIU

MD, MSc, PhD, Consultant at Metropolitan Hospital, Athens



### Radiological Imaging in Pilonidal Disease

The presentation by Dr. Georgios K. Georgiou at the 4th biolitec® laser summit focuses on the radiological imaging of pilonidal disease (PD), emphasizing diagnostic, intra-operative, and post-operative roles of various modalities. The talk covers the acute and chronic phases of the disease, pre-operative mapping, intra-operative guidance, and the assessment of treatment success.

Dr. Georgiou stresses the importance of ideal imaging in pilonidal disease: it should be surgeon-performed, affordable, widely available, reproducible, radiation-free, and provide detailed anatomical information rather than just diagnosis. The main imaging techniques discussed are X-ray, ultrasonography (U/S), computed tomography (CT), magnetic resonance imaging (MRI), positron emission tomography combined with CT (PET-CT), and endoscopy.

Among these, ultrasonography emerges as the preferred modality for pilonidal disease. It is highlighted for its comprehensive diagnostic capability, accessibility, ease of learning, reproducibility, safety, patient tolerability, and cost-effectiveness. Ultrasound with linear probes and coronal and sagittal views enhanced by hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) facilitates precise identification of primary pits and lateral sinus tracts. It supports differentiation

between acute and chronic disease phases, guides intra-operative interventions, and allows post-operative evaluation to detect complications.

Other imaging methods are reviewed critically: X-rays provide limited detail, CT offers anatomical understanding but involves radiation, MRI is expensive, may be uncomfortable for patients, and does not always reproducibly diagnose pilonidal disease. PET-CT, though costly and complex, helps in specialized cases. Endoscopy is also utilized to visually confirm sinus anatomy.

In conclusion, the presentation advocates for ultrasonography as the preferable, frontline imaging technique for pilonidal disease due to its practicality, safety, and surgeon-friendly nature. This modality supports improved diagnosis, operative management, and post-treatment monitoring effectively, fulfilling the criteria for ideal imaging in this context.





## DR. NIELS KOMEN

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# PSD Treatment: Stuck in the Middle Ages or Leaping into the 21st Century?

According to the 2024 ESCP Guidelines published in BJS, treatment techniques for PSD include drainage and curettage, phenol application, fibrin glue, laser therapy, marsupialisation, EPSiT, minimally invasive surgery (MIS), pit picking, PRP, and excision with open healing. As stated in the guidelines, these techniques may be considered or offered; levels of evidence range from expert opinion to very low, low, or moderate.<sup>1</sup> According to Komen the technological perspective for the 21st century is evolution of surgery from invasive to minimally invasive treatments whereas he highlights the increasing role of shared decision making according to which doctors share information with patients who consider them so they can make a decision together.

Invasive techniques include lay open with time to healing of 21 to 72 days.<sup>2</sup> Komen refers to a meta-analysis according to which primary midline closure offers shorter healing times than open healing. After closure dehiscence was 9% and wound infection was 2-33%. Compared to midline closure, off-midline closure offers lower infection rates and lower recurrence.<sup>3</sup> Invasive off-midline approaches include the rotational flap (Dufourmental flap, Limberg flap) and the Advancement flap (Karydakias flap). For these approaches TTH is 10 – 31 days, dehiscence is 1 – 45% and wound infection is 3-29%.<sup>4</sup> Minimally invasive approaches include pit picking and sclerosing. For pit picking TTH is 28-56 days and wound complications are at 15%.<sup>5</sup> Also sclerosing offers shorter TTH and time to return to normal activities.<sup>6</sup> MIS also includes SiLaC® and Komen in this context refers to studies by De Decker and Sluckin, indicating primary healing rates of 78,8% and 66%, secondary healing rates of 85,4% and 92-98% as well as complication rates of 7,2% and 7,8%, respectively.<sup>7</sup> (P)EPSiT/VAAPS offer healing rates of 76% after one and 83% after two sessions, as well as TTH of 26 days and a complication rate of 9%.<sup>8</sup> Komen indicates that Limberg & Dufourmental as well as Karydakias & Bascom approaches are associated with low recurrence, referring to relevant studies.<sup>9</sup> Against this backdrop and along the axis from minimally over moderately to maximally invasive

approaches, Komen sees an increase in recurrence and a decrease in complications when progressing from maximally to minimally invasive approaches.

As far as current practice in the Netherlands is concerned, the most frequently performed techniques still are the traditional excision techniques.<sup>10</sup> Similar applies to the UK.<sup>11</sup> So excision and leave open are the most popular approaches, while adoption of minimally invasive surgery (MIS) remains limited. Why are we stuck in the middle ages? Patients prefer low risk of infection/persistence and shorter recovery time. For people over 29, quick recovery is more important than the risk of treatment failure. All patients reject leave open due to home nursing.<sup>12</sup> Leave open is associated with the lowest wound healing rates and the slowest return to normal activity. Of the patients who underwent a leave open approach, 20.6% were dissatisfied or very dissatisfied with their treatment.<sup>13</sup> Remarkably, data for Belgium show colorectal surgeons tend to apply SiLaC® whereas general surgeons tend to excision with healing per secundam.<sup>14</sup> Contributing factors include the heterogeneity of definitions/reporting and the fact that no clear classification systems are used. The lay open approach also involves higher costs because it requires longer hospital stays and higher material costs (e.g. number of dressings).<sup>15</sup> So PSD treatment is largely stuck in middle ages, despite high tech. Compared to flap surgery, minimally invasive surgery (MIS) has a higher recurrence rate, but offers lower complication rates, smaller scars, shorter recovery times, and faster return to activities of daily living (ADL).

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**Compared to flap surgery, minimally invasive surgery (MIS) has a higher recurrence rate, but offers lower complication rates, smaller scars, shorter recovery times, and faster return to activities of daily living.**



## DR. MUSTAPHA OUALI

Endoscopic Visceral Surgeon and Proctologist, Formerly Assistant Professor at Sfax University Hospital, Tunisia.

### SiLaC® +/- EPSiT®? Choosing the Right Case

Dr. Mustapha Ouali gave a comprehensive overview of the laser-endoscopic management of pilonidal sinus disease (PSD), emphasizing the clinical outcomes and decision-making between using the SiLaC® (Sinus Laser Closure) technique alone or in combination with EPSiT® (Endoscopic Pilonidal Sinus Treatment). The presentation synthesizes findings from a 468-patient clinical series and aligns with contemporary efforts toward standardization in minimally invasive anorectal surgery.<sup>1</sup>

SiLaC® refers to closing the sinus tract with a 1470-nm radial laser fiber after thorough cleaning, while EPSiT® adds an endoscopic step to visualize and treat every branch under direct vision. When both steps are combined, the procedure is termed E-SiLaC® – a nomenclature now endorsed by the ISoLP group to unify terminology and minimize confusion.

For SiLaC® alone, indications include primary, uncomplicated PSDs with straight tracts and limited midline pits. Under local or spinal anesthesia, the sinus cavity is opened, debrided, irrigated, and treated with controlled photothermal energy delivered via the laser. Healing typically occurs within three to six weeks, with minimal scarring and rapid recovery. The E-SiLaC® procedure expands this approach to recurrent or complex tracts by introducing a fistuloscope through which all branches are explored, cleaned, and ablated under continuous irrigation. This precision reduces recurrence by ensuring complete elimination of every epithelialized segment and embedded hair follicle.

The ISoLP Position Paper stresses several safety and procedural principles:<sup>2</sup> abscesses must first be drained before applying the laser; imaging is reserved for recurrent or lateral disease; tailored anesthesia and post-procedure laser depilation further decrease relapse risk; and standardized reporting of outcomes enhances comparability across centers. This framework underpins the clinical experience that follows.

Among the 468 consecutive patients treated at the Proctolaser Clinic, 353 underwent SiLaC® and 115 E-SiLaC®. The overall recurrence rate was 4.5%, with 5.1% after SiLaC® alone and 2.6% after the combined technique. Healing exceeded 95%, and return to normal activity occurred within 3–4 days. Complications were minor (1.7%), and no

patient required reoperation. Subgroup analysis showed that recurrence in recurrent PSD treated with SiLaC® was 14.9% – about four times higher than in primary disease (3.6%) – thus substantiating the recommendation to escalate to E-SiLaC® in redo or complex cases.

The decision algorithm proposed in the Position Paper is straightforward: drain active abscesses first; choose SiLaC® for simple, primary tracts; and opt for E-SiLaC® when encountering recurrent, branched, or lateral disease. When in doubt after probing or ultrasound, EPSiT® is added. This tailored selection preserves the advantages of a minimally invasive approach – low morbidity, excellent cosmetic results, and rapid convalescence – while minimizing recurrence risk.

When compared with published evidence<sup>3</sup>, the results of Dr. Ouali's cohort are at the favorable upper end of current benchmarks. Meta-analyses report healing rates above 85–90% and recurrence of 3–5% for SiLaC®, dipping slightly when EPSiT® is added. These figures are markedly superior to those of traditional excision or flap techniques, where recurrence can reach 10–30% with prolonged recovery periods. The data underline the value of combining laser precision with endoscopic visualization to ensure complete sinus closure, particularly in complex anatomy. Dr. Ouali concludes that both SiLaC® and E-SiLaC® offer robust, patient-centered solutions for PSD, reducing pain, downtime, and scarring. SiLaC® remains ideal for straightforward cases, while E-SiLaC® provides an effective strategy for recurrence prevention in complex or redo disease. Future research should focus on multicenter trials, longer follow-up, and cost-effectiveness analyses to consolidate these promising mid-term results and refine patient selection criteria.

<sup>1</sup> Data available via Proctolaser Clinic in Sfax-Tunisia.

<sup>2</sup> Ouali, M. et al.: International Society of Laser Proctology Position Paper on SiLaC and EPSiT/SiLaC in the Management of Pilonidal Sinus Disease; *Lasers Surg Med.* 2025 Oct 13. doi: 10.1002/lsm.70071.

<sup>3</sup> For evidence Ouali refers to: For published evidence Ouali refers to a systematic review on SiLaC by Schwandner et al. (2024); a SiLaC single center study by Acar et al. (2024); a meta-analysis by Zielinski et al. (2025) on laser for recurrent PSD; the Proctolaser Clinic Multiple series (2014–2022) on EPSiT® alone; a study on SiLaC® + EPSiT® (combined) by Ouali M. (2025); a pilot study by the LEPSiT Study Group (2023) on LEPSiT.



## PROF. DR. JIONG WU

Yueyang Hospital of Integrated Traditional Chinese and Western Medicine affiliated to Shanghai TCM University

### SiLaC® - Experience from the Chinese Centre of Excellence in Proctology

According to Wu, the Yueyang Hospital of Integrated Traditional Chinese and Western Medicine began to conduct laser surgery in China since 2017. Currently, it is the largest center in China for laser treatment of proctology. The number of publications on pilonidal sinus has risen sharply in recent years. With regard to the treatment of pilonidal sinus, excision and midline closure is no longer recommended in the US, German, Italian, and Chinese guidelines, while the minimally invasive approach (EPSiT/SiLaC®) is recommended.<sup>1</sup> Wu points out that existing techniques such as Karydakis, Bascom II, Limberg/modified Limberg flap, V-Y advancement flap, Dufourmentel flap, and Z plasty should therefore be reconsidered in light of minimally invasive approaches that may offer better treatment options. Advantages of laser treatment include a high cure rate and low recurrence rate. It offers fewer complications, simple operation, high repeatability, and easy postoperative care. Economically, it results in a short hospital stay and less time off work. Cosmetically, it reduces scarring. Referring to Dessily et al., Wu emphasizes that SiLaC® offers healing rates >90% and recurrence rates <15%.<sup>2</sup> SiLaC® uses a 1470 nm (optimal absorption in water) radial laser probe at 10 watts to precisely destroy the epithelium lining of the sinus tract and shrink the tract. It penetrates tissue only 2–3 mm deep, minimizing injury to surrounding tissue, pain and wounds, promoting fast healing. Wu refers to the results of a study based on 48 patients, indicating 100% healing rate, 28.3 ± 5.5 days average healing time, 15.5 ± 3.3 min mean operative time and 2.1% recurrence rate.<sup>3</sup> The median visual analog scale (VAS) score on the day of operation was 0(0,2). After the operation there was no wound infection or bleeding. The mean time until return to normal work/life was 7.1 ± 3.2 days. The authors conclude that laser ablation using a 1470-nm radial diode laser fiber is effective in sacrococcygeal pilonidal disease (SPD) treatment. The therapy is associated with only minor wounds and mild postoperative pain. It is a simple, safe, and minimally invasive technique and its clinical application for acute and chronic SPD in the absence of abscess is promising. Referring to an unpublished study based on 509 patients, Wu indicates healing

rates of 98.6% and recurrence rates of 4.4%, whereas age ≤18 was identified as an independent risk factor, associated with delayed healing and higher recurrence. A meta-analysis (137 patients with recurrent pilonidal sinus; healing rate 81.9%), Wu refers to, confirms laser ablation as an effective and safe method for treatment of recurrent sacrococcygeal pilonidal sinus in the short term (87.2% ≤ 12 months), but indicates a trend toward a lower healing rate with extended follow-up periods (74.5% > 12 months).<sup>4</sup> Wu's conclusion emphasizes that minimally invasive surgery offers a simple, easy-to-repeat procedure with high patient acceptance and satisfaction. It enables rapid recovery and quick return to work or school, results in less scarring and better cosmetic outcomes. Although the cost of the laser fiber may be higher, it is justified by these significant advantages.

<sup>1</sup> The American Society of Colon and Rectal Surgeons' Clinical Practice Guidelines for the Management of Pilonidal Disease (2019); German National Guideline on the management of pilonidal disease (2020); Consensus statement of the Italian society of colorectal surgery (SICCR): management and treatment of pilonidal disease (2021)

<sup>2</sup> M. Dessily et al.: Pilonidal sinus destruction with a radial laser probe: technique and first Belgian experience; *Acta Chir Belg.* 2017 Jun;117(3):164-168. doi: 10.1080/00015458.2016.1272285.

<sup>3</sup> Li, Z. et al.: An effective and considerable treatment of pilonidal sinus disease by laser ablation; *Lasers Med Sci.* 2023 Mar 1;38(1):82. doi: 10.1007/s10103-023-03741-1.

<sup>4</sup> J. Qin et al.: Efficacy and safety of laser ablation for recurrent pilonidal sinus: a systematic review and meta-analysis; *Int J Colorectal Dis.* 2025 Feb 19;40(1):47. doi: 10.1007/s00384-025-04832-x.

## CRYSTAL CUP AWARD WINNERS

## Proctocom 2025 in Krakow

Ahead of PROCTOCOM 2025 in Krakow, biolitec® organized an abstract competition to highlight innovative research in laser-assisted proctology. The following booklet section features the three winning abstracts, selected by an expert jury.



## Enhanced Energy Delivery with REVO LHP Enables Treatment of Large Hemorrhoids

**Dac Thao Nguyen, Tat Thanh Do, Nhat Huy Le, Phuc Khanh Pham, Thi Thanh Huyen Pham Vietduc**  
University Hospital, Hanoi, Vietnam

**Introduction:** Laser hemorrhoidoplasty has emerged as a minimally invasive procedure that reduces bleeding and prolapse with less postoperative discomfort and faster return to daily life.

**Subjects and Methods:** We retrospectively analyzed 64 patients who underwent LHP® (Dec 2023–Dec 2024). Patients were divided into low-energy (LE) and high-energy (HE) groups. LE was defined as <1000 J/case, and HE >1000 J or >200 J per pile. Procedure: Laser energy was delivered submucosally in lithotomy position. Settings: 8W-3/1s (HE) and 8W-1.2/0.3s (LE). Ice was applied post-firing, ending with a collagen pad. Post-op care: Medical therapy consisted of Metronidazole and acid tranexamic for 5 days and Daflon for 2 weeks.

**Results:** Baseline characteristics: Mean age: 42.2±12.2. Grade III: 64.1%. Intraoperative findings: The HE group had more hematomas (21.9% vs. 3%, p=0.027), received higher total energy (1097 vs. 583J), and required longer hospitalization (38.7h vs. 14.5h, p=0.01). Short-term outcomes: VAS scores significantly lower in the LE group at 6h and D1 (p=0.003 and p=0.012). Return to work was faster (2.2 vs. 3.7 days, p=0.003). Complications were common in the HE group (bleeding 9.4% vs. 0%, urinary retention 12.5% vs. 3.1%). Long-term outcomes: At 6 months, bleeding resolved in 93.8% (LE) and 90.6% (HE). Recurrence: 1 case (LE), 2 (HE). Residual skin tags: more frequent in the HE group (18.8% vs. 6.3%).

**Conclusion:** LHP® is a safe, effective, minimally invasive method for hemorrhoid treatment. Both LE and HE settings are effective, but LE offers better pain control, fewer complications, and shorter recovery. Tailoring energy settings to patient needs is essential for optimal outcomes.

### Tips and tricks for the technique:

- Spinal anesthesia causes the piles to protrude more, making surgeons confused about how much energy to deliver.
- Always rotate the laser fiber during operation to prevent surrounding tissue from adhering to the tip and causing carbonization.
- Low-energy settings provide the same effect as high-energy settings but with fewer complications.
- Besides the primary piles, other sites can be treated with a low amount of energy.
- Skin tag removal should be performed by cross-section instead of the classical diamond-shaped section to preserve the sensitive pecten area.
- Early postoperative bleeding often occurs in the first 2 weeks due to a broken hematoma.





## SiLaC should be the First Line Treatment for Pilonidal Disease

**Dr. Kishan Nishit Patel, Mr. Alexander Hotouras;**

Colorectal Surgery Department at Whipps Cross University Hospital, Barts NHS Trust – London

**Background:** Pilonidal disease (PD) affects 26/100,000 individuals in the UK highlighting its public health significance. Introducing SiLaC® offers a minimally invasive option. The study aim is to assess the long term outcomes of SiLaC®.

**Method:** A single centre prospective cohort study was undertaken over 2 years (2023-2025) at a London teaching hospital. All SiLaC® patients were included in the study. Data analysed included demographics, complications, satisfaction and primary healing rates. Complications were classified using the Clavien-Dindo classification (CDC).

**Results:** 29 procedures were undertaken under general anaesthesia (GA) in 26 patients [19 Male : 7 Female; 27 years (15-45)]. The majority of cases (n=24, 82.8%) were primary procedures, while n=5 patients (17.2%) underwent secondary interventions. The median energy delivered during the SiLaC® procedure was 605.6J (133-3631J) and the median operative time was 52 seconds (15s-306s). 69% (n=20) patients were discharged with postoperative

antibiotics. The median follow up was 230 days (30-650). 9.1% (n=2) of procedures were classified as CDC 2, due to infections managed with antibiotics. Primary healing was achieved in 78.3% (n=18) patients. 3 patients (12.5%) required a secondary procedure; all of whom underwent redo SiLaC®, resulting in an overall healing close to 90%. Patient-reported satisfaction was high, with an average of 8.56 out of 10.

**Conclusion:** SiLaC® should be the first line treatment for PD in view of its success rate, minimal complications and patient satisfaction.



## Does Internal Opening Location Matter? A Long-term retrospective study of FiLaC® Efficacy

**Dr. Lei Jin, Dr. Zhicheng Li, Prof. Dr. Zhengyi Wang, Prof. Dr. Jiong Wu**

Yueyang Hospital of Integrated Traditional Chinese and Western Medicine, Shanghai University of Traditional Chinese Medicine, Shanghai, China

**Objective:** The aim of this study was to evaluate the long-term efficacy of FiLaC® in the treatment of cryptoglandular anal fistula.

**Methods:** Data of patients with cryptoglandular anal fistula in Parks I-II who underwent FiLaC® in our department between September 2017 and December 2019 were retrospectively analyzed. Demographic data, perioperative data and postoperative data were collected and statistically analyzed.

**Results:** A total of 52 patients were included in the study. The success rate at 3 months, 1 year, and 5 years were 76.9% (40/52), 75% (39/52), 71.2% (37/52), respectively. The differences between the internal orifice position subgroups were statistically significant (P=0.013), with the anterior type having a lower success rate than the bilateral and posterior types. No statistically significant differences were observed between the subgroups: Parks

classification, treatment of internal orifice. All the scores, including visual analogue scale pain score (VAS-PS), Cleveland clinic florida incontinence score (CCF-IS), and the quality of life in patients with anal fistula questionnaire score (QoLAF-QS) showed no obvious difference.

**Conclusion:** Long-term follow-up confirmed the effectiveness of FiLaC® in the treatment of anal fistulas and has irreplaceable advantages in terms of postoperative pain and complications.

## The Consensus Papers

The International Society of Laser Proctology (ISoLP) promotes progress in laser-assisted proctology by advancing research, education, and clinical standards. Following this mission, the LHP® Recommendations (2024) and the FiLaC® Recommendations (2025) introduced detailed guidelines to standardize the LHP® and FiLaC® procedures. In 2025, ISoLP also issued a Position Paper with 10 statements on laser-assisted management of pilonidal sinus disease. These consensus papers confirm the safety and efficacy of the biolitec® laser techniques and provide clear guidance for clinical practice.

### LHP® Recommendations

Ambe, P.C. et al.: Best clinical practice recommendations for the management of symptomatic hemorrhoids via laser hemorrhoidoplasty: the LHP recommendations; Tech Coloproctol. Nov 23; 29(1) (2024):2; doi: 10.1007/s10151-024-03022-1



### FiLaC® Recommendations

Ambe, P.C. et al.: Laser fistula treatment: beyond the controversial aspects: best clinical practice recommendations from an international group of surgeons with extensive experience in the procedure—the FiLaC recommendations; Tech Coloproctol 29, 131 (2025). doi: 10.1007/s10151-025-03164-w.



### SiLaC® Position Paper

Ouali, M. et al.: International Society of Laser Proctology Position Paper on SiLaC and EPSiT/SiLaC in the Management of Pilonidal Sinus Disease; Lasers Surg Med. 2025 Oct 13. doi: 10.1002/lsm.70071.



**SAVE THE DATE**

# PROCTOCOM 2026

June 19th – 21st, 2026  
Porto, Portugal

Friday – Foundational Sessions

Saturday and Sunday – Advanced Sessions



We look forward  
to seeing you.  
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