

To Study the Competitive Landscape of Pico Second Lasers in Aesthetic Medical Devices Market

By

Shubham Kumar Das

*Dissertation submitted for the partial fulfillment of the
MBA Pharmaceutical Management*

Academic year, 2018-2020



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CERTIFICATE BY THE SCHOLAR

This is to certify that the dissertation titled **Studyon Competitive Landscape and Attribute Analysis of Pico Second Lasers in Aesthetic Medical Devices Market** submitted by **Shubham Das** Enrollment No: **IIHMR-U/02/2018-20/0150** under the guidance of **Dr. Abhishek Dadhich, Asst. Professor, Indian Institute of Health Management Research** for award of **MBA in Pharmaceutical Management** from **IIHMR University, Jaipur**. I conducted the study at **Aakaar Medical Technologies, Mumbai** during the period from **11th March 2020 to June 10, 2020**. This study is my original work and is not based on awarding degrees, diplomas, associations, scholarships, degrees at this institution or other or similar universities in India.

Shubham Das

MBA-Pharmaceutical Management

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Last but not least, I thank my family members and peers for their constant care and motivation throughout my journey.

Sincerely,

Shubham Das

MBA-PM10

About Aakaar Medical Technologies (Formerly Coherent Systems)

Aakaar Medical Technologies (Formerly Coherent Medical Systems) is a fully private company founded in 1999. Aakaar offer a range of aesthetic products with versatile technologies that help in sustaining young appearance.

Aakaar Medical Technologies is a pioneer in bringing cutting edge technologies such as laser hair removal, dermaroller and threadlift to Indian subcontinent. Aakaar Medical Technologies is immensely honored in representing the world's leading aesthetic companies such as Canbio, Viora, Theraderm, Reviderm, Contura, Anteis-Merz, Dr. Derm, Dinona-Sellas, Revivogen and Innoaesthetics and strive to continuously providing dynamic newer products and systems in India.

Aakaar Medical Technologies provide products and technologies for various treatment solutions such as Pimples & Blemishes, Skin toning, Hair reduction, Pregnancy Marks, Skin rejuvenation, Medi-facial, Dermal Hyaluronic acid Filler, Stubborn lesions, Permanent Tattoo removal, Hair Growth, Hair Removal. We have a complete range of surgical & non-surgical solutions for cosmetology, dermatology, plastic surgery clinic.

Founded in 2000, "Aakaar Medical Technologies Pvt Ltd Formerly Coherent Medical Systems", is one of the well-known distributors and suppliers of various hair care and care products and medical devices. Our range includes body building, intensive pulse light technology, acne therapy, electroporation, fine thread extraction, psoriasis therapy, skin care and lasers. Aakaar also offer radiosurgery machines, hydrogels, whitening creams, reduction treatments, skin care creams, aesthetics and hair revitalization products. Products offered by our organization are provided by reliable market partners. Associates further helps by processing the product line offered with ingredients derived from nature, thereby ensuring the product is gentle on the skin and without reaction.

The medical devices we provide are generally used for conducting operations, surgical treatments as well as non-invasive treatments in health centers, hospitals and nursing homes. Our hair care products are widely used to nourish the scalp, rejuvenate hair, reduce hair loss and add luster. In addition, Aakaar range of skincare products is the perfect solution for the treatment of pimples and blemishes, skin toning, pregnancy marks, skin rejuvenation, medi-facials, exclusive hyaluronic fillers, stubborn epidermal lesions, removal of permanent tattoo as well as dermal fillers.

Headquarters : Mumbai, Maharashtra
Founded : 1999
Specialties : Dermatology, Plastic Surgery, cosmetic, Beauty, Aesthetic

EXECUTIVE SUMMARY

Laser (L-A-S-E-R) is an abbreviated acronym for light amplification by stimulated emission of radiation. Laser are high energy source of light with specific wavelength that accurately focusto transmit that light onto a very short area.

Aesthetic Medical laser can be distinguished as non-ablative laser and ablative laser. The characteristics of ablative lasers is that it vapourise upper layer of the damaged skin surface, whereas non-ablative laser went deeper in the skin without harming upper layer of the skin. As a result, no actual downtime is witnessed in patients undergoing cosmetic procedure, where only non-ablative laser technology is used.

Lasers are commonly used in numerous cosmetic procedures which are fundamentally based on the principle of "selective photothermolysis". Photothermolysis suggests that the wavelength of the energy source must be in coordination with the target color that is to be processed, regardless of whether it is deepred colored capillaries visible on skin or brown spots, or any other unfavoural skin indications.

The prime difference is wavelength which differentiate different types of laser. To simplify, skin problems that are targeted by lasers are subjected to treatment based on their wavelength (i.e. different colors of light).

The Q-switched laser removes unwanted spots, freckles or tattoos from your skin. Laser energy pulses release pigment into the skin within a fraction of second so that it is reabsorbed and naturally eliminated by the body. Q-Switch Nd:YAG lasers have excellent results in permanent lesions, cancerous lesions, epidermal lesions, tattoo erasing, hair reduction and treatment of acne and blemishes.

Pico Q-switch lasers are aexclusive type of aesthetic lasers which is able to direct precise energy in extremely short bursts (within several billionths of a second) onto the target area. Picosecond laser systems achieves a better clearance with minimal sessions and less incidences of post-inflammatory hyperpigmentation, exhibiting superior clinical outcomes and lesser adverse effects in contrast to Q-switched laser.

PICOCARE is a Neodymium yttrium aluminum garnet (ndyag) picosecond laser device which has been developed to treatment of pigmented lesions and permanent tattoo removal of all tattoo colors. In regard to speed and comfort, its effectiveness outperforms other devices on the market. Pico second lasers diminish any injury to skin in pigmentation removal through accurately aiming the targeted lesions. Pico Second Laser features latest Pico Pulse Technology with fractional mode. Pico second laser is a rapid, safe and easy medical laser skin treatment for all types of pigment, tattoo & scar treatment.

APPLICATIONS OF PICO SECOND LASERS

“Utilizing picosecond (one trillionth of a second) pulse durations, Pico second laser can treat a wide variety of skin conditions, ranging from unwanted tattoos, nevus of ota, cafe au lait birthmarks, post inflammatory hyperpigmentation, and otherpigmented lesions with far fewer side effects than previous devices”⁹

STATE OF THE MEDICAL LASER DEVICES INDUSTRY - BRIEF HISTORY & EVOLUTION:

The origins of laser technology go back to 1900 when the German theoretical physicist Max Planck discovered the relationship between energy and radiation frequency and came to the conclusion that energy can only be emitted or absorbed in individual pieces known as quantum.²

American physicist Theodore Maiman was the first to develop a laser used for clinical application.¹ In 1960, he introduced a laser composed of a ruby rod emitting light energy at 694nm.³ In 1963, American surgeon Leon Goldman, a pioneer in applying lasers to dermatologic conditions, reported on the effects of Maiman’s ruby laser in the selective photo destruction of pigmented skin elements such as black hair.

Other developments and clinical applications soon followed in a flurry of published works. Goldman went on to elucidate the use of both ruby and Q-switched lasers for tattoo removal and pigmented lesions while studying the argon laser for vascular lesions and carbon dioxide lasers for skin lesion destruction. Over the next decade, advancements in dermatologic photo surgery developed, including the advent of photodynamic therapy, light-based wound healing, and the development of the Nd: YAG (neodymium: yttrium-aluminum-garnet) laser for vascular lesions.

The theory of selective photothermolysis by dermatologists Rocks Anderson and John Parish was published in 1983.⁴ Their article describes the interaction between lasers and tissue that leads to selective destruction of target structures called chromophores.

Laser energy with a predetermined wavelength is mainly absorbed by the chromophore, resulting in greater heat absorption from the target, resulting in selective heating and tissue destruction.

The next major advancement in cutaneous laser surgery was achieved with the development of fractionated laser technology. Fractionated lasers have transformed our ability to treat wrinkles, skin laxity, tone, texture, dyschromia and scars both safely and effectively.

Nowadays, lasers and light devices have the ability to resurface, rejuvenate and treat vascular lesions of all types. They can also remove and modulate fat, reshape the body, remove unwanted hair and grow hair too

INTRODUCTION

Aesthetics is a branch of philosophy which deals with the nature of art, beauty, taste and with the creation of appreciation of beauty. In the more technical epidemiological perspective, it will be described as the study of subjective and sensory emotional values or sometimes called judgements of sentiments or taste. Aesthetic treatment is an inclusive word for specialist that focusses on enhancing cosmetic appearance by the treatment of different conditions related to the skin which includes scars, skin laxity, wrinkles, fine lines, ageing, excess fat, unwanted hair, skin discoloration, skin pigmentation, skin tanning. Typically, aesthetic treatment are used in cosmetology, dermatology, general surgery, plastic surgery as well as wellness centers.

The branch of aesthetics also includes both surgical procedure (liposuction, face lifting by threads, breast implants, radio frequency ablation). Non-surgical procedure (radio frequency, skin tightening, non-surgical liposuction, chemical peel etc.

Although aesthetic treatment procedure is typically elective, they can significantly improve quality of life wellbeing and social engagement.

SCOPE AND NATURE OF AESTHETICS DEVICES:

Laser aesthetic devices comprise of various medical equipment's that are put to use for conducting cosmetic procedures, including cosmetic surgery, hair removal, fat removal, beauty implants, skin toning, and many others that are used for enhancing appearance, rectification, & refinement of the body. Medical laser procedures consist of invasive and non-invasive treatments. Invasive procedures include liposuction, breast implants, radiofrequency and other related procedures. Non-invasive treatment consists of peels, non-intrusive liposuction, skin toning treatment, and more.

THE MEDICAL AESTHETIC DEVICES MARKET

The market for medical-aesthetic equipment is broken down by device type, application (skin recovery, rejuvenation and toning, body contouring systems, face contouring, breast enlargement and numerous related applications), end users and geo-demographical locations

Dublin, April 14, 2020 (Globe Newswire) -- The "Aesthetic Lasers and Energy Devices Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2020-2025" report states that "Certain factors that are driving the market growth include increasing obese population, increasing awareness regarding aesthetic procedures and rising adoption of minimally invasive devices, and technological advancement in devices. The concern of people about their appearance is gradually on the increase, both in the developed and the developing countries. Thus, there is an increase in the number of cosmetic surgeries performed annually. With the advent of the internet, information became accessible to everyone and people started becoming more aware of the

aesthetic procedures. All these factors together increased the awareness among the masses about the medical aesthetic procedures, which in turn, has increased the sales of medical aesthetic devices, resulting in huge growth in the market size of medical aesthetic devices”

“The market for aesthetic lasers and energy devices is primarily driven by significant technological advancements in the medical and beauty industries, coupled with increasing consciousness among individuals regarding their physical appearance. An upsurge in the incidences of severe skin damage due to various reasons such as road accidents is also acting as a major growth-inducing factor. Furthermore, increasing prevalence of skin cancer and obesity, which often leads to distorted physical appearance, is contributing to the market growth. Moreover, changing fashion and the trend to follow celebrity looks are also driving the market. Some of the other factors that are expected to create a positive outlook for the market include extensive research and development (R&D) in the field of dermatology and the growing consumer expenditure capacities. Looking forward, the market value is further expected to grow at a CAGR of around 10% during 2020-2025”

SAFETY AND EFFICACY OF TATTOO REMOVAL

Is it possible to remove tattoo completely?

Yes, Due to advancement in technology It is now possible to remove tattoos completely.

The "standard modality for tattoo removal" is the non-invasive removal of tattoo pigments using Q-switched lasers. Different types of Q-switched lasers are used to target different colors of tattoo ink depending on the specific light absorption spectra of the tattoo pigments. Typically, black and other darker-colored inks can be removed completely using Q-switched lasers while lighter colors such as yellows and greens are still very difficult to remove. Success can depend on a wide variety of factors including skin color, ink color, and the depth at which the ink was applied.

KeyMarket Trends

Significant growth is predicted over time in the non-surgical skin tightening device segment in India.

As per the report of “India Aesthetic Devices Market - Growth, Trends, and Forecast (2019 - 2024)” by Mordor Intelligence “With the advent of minimally invasive procedures in general surgery, the skin tightening devices also observed significant technological advancements in recent years. In the Indian market, various types of the non-surgical skin tightening devices are available, but the majority of the devices consist of laser energy, radiofrequency energy, ultrasound energy, or a combination of

these energies to deliver heat to the skin tissue. Another factor that is fueling the non-surgical devices segment is that these devices come with minimal side effects, and no pain is involved in the treatment. As a number of companies planning to further establish in the tier II cities of India, the potential demand for these devices is estimated to increase⁸

GlobalLaser Market For Aesthetics Is Mainly Primarily Driven By The Following Parameters:

- Increase income and lifestyle changes
- Technological development
- Increase the geriatric population
- Advancements in minimally invasive and non-invasive aesthetic procedures

LITERATURE REVIEW

“Study of Literature is a briefing of research topic of interest, often prepared to put a research problem in the context as the basis for an implementation project.” A literature study helps to lay the bottom for the study and can also inspire new research ideas. Review of literature provides basis for future analysis, justifies the need for copying, throws light up on feasibility of the study, and indicates constraints of data collection and help to relate findings of one another.

Literature 1

Published online Dec31, 2017 Available URL:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5801452/>

“The picosecond-laser is a revolutionary advance for laser tattoo removal but may be a less effective device in other indications such as those currently being treated with the numerous no-down time cosmetic devices present in the market: The same applies for ps-laser treatments of melasma and other cosmetic procedures. Basic studies must be performed before trying to expand sales of the devices, in addition to a much deeper understanding of the theoretical laser/tissue interaction specific to the picosecond-laser.”

Literature 2

Published online March1, 2017 Available URL:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5367877/>

“The picosecond laser is a revolutionary laser technology due to its much-shortened pulse duration of just 10^{12} seconds in treating minocycline-induced pigmentation, Q-switched alexandrite laser is considered effective but typically requires several treatments many months apart to achieve the desired clearance.”

Literature 3

A study on Laser tattoo removal: a clinical update. Ho SG, Goh CLJ CutanAesthet Surg. 2015 Jan-Mar; 8(1):9-15. Published online on PubMed

“The use of a 1,064-nm wavelength Nd:YAG picosecond laser for the successful removal of blue, black, and purple ink while 532-nm was used for red and yellow ink. These variable wavelengths allow for the more effective treatment of difficult-to-remove colors

Furthermore, while most lasers take around 7 to 10 treatments, which can be both costly and time-consuming, a recent review article reported several studies in which the picosecond laser achieved 75-percent clearance in just 1 or 2 treatments.”

Literature 4

Published online Feb2019 Available URL:

[https://www.researchgate.net/publication/330836142 Evolution of the Picosecond Laser A Review of Literature](https://www.researchgate.net/publication/330836142_Evolution_of_the_Picosecond_Laser_A_Review_of_Literature)

“Picosecond laser were initially used in tattoo removal, to optimize efficacy and reduce side effects with nanosecond domain lasers. More recently, they have been demonstrated to be effective in the treatment of pigmentary disorders, acne scarring, and photoaging.

The development of the picosecond pulse duration is a breakthrough innovation in laser technology, changing the scope of laser treatment. Encouraging findings in tattoo pigment clearance spurred the use of Picosecond Laser in a wider array of dermatologic

issues. The increasingly positive results and low incidence of adverse effects further substantiates Picosecond Laser efficacy for a variety of dermatologic uses.”

Literature 5

Published online September6, 2018 Available URL:

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0203370>

“Picosecond lasers have emerged as the leading technology for tattoo removal due to their shorter pulse lengths.

A picosecond 755 nm laser excellent efficacy in removing only green and blue pigments. a picosecond 1064 nm laser demonstrated some effects on non-black colored tattoos. In terms of safety, picosecond lasers produced less tissue injury than nanosecond lasers. Conclusively, picosecond lasers are more effective and safer than nanosecond lasers.”

1. AIM OF THE STUDY

To Identify The Competitive Landscape of Pico Second Lasers in Aesthetic Medical Devices Market.

2. RESEARCH QUESTION:

- Who are the key competitors in Pico second lasers market?
- What are the key metrics for comparison of Pico second lasers?
- Is it possible to remove tattoos completely?

3. OBJECTIVES:

- To understand the competitive landscape and attribute analysis associated with q-switch Pico second laser devices.

4. RESEARCH PLAN: The research will be secondary research. The Plan for research is given below.

4.1. DATA SOURCE: A secondary research was done for this project. All data was gathered from internet, published reports:

- A. Company data, documents and past records
- B. Publications
- C. Websites: information was also gathered from different websites.

4.2. RESEARCH APPROACH: Data available on internet and company records was observed and analyzed on different criteria to make conclusion.

4.3. RESEARCH INSTRUMENTS: All the data was collected from internet and past records

4.4. COLLECTION OF INFORMATION: Information was collected from internet, libraries and valuable experience of persons involved in the industry. The previous records, files and documents of the company was also studied.

4.4. ANALYSIS OF INFORMATION: The data was used to understand and analyze the significance and scope of use of Pico second lasers devices

5. METHODOLOGY: The study is based on literature review. The secondary data is taken from various journals, publications and reports of public listed companies.

MATERIALS AND METHODS:

Data Type: Secondary

Research Design: Descriptive

Data Collection Tool: Secondary data is taken from various journals, reports, and companies' official webpage.

6. OPERATIONAL DEFINITIONS:

Lasers are mechanisms that use the natural vibrations of atoms and molecules between energy levels to produce a coherent beam of electromagnetic radiations, usually in form of visible, infrared or ultraviolet spectrum.

Q-Switch Lasers are the devices that use active or passive Q-switching technology to emit pulses of optical energy.

Q-switching is a technique where a laser can produce pulsed light output. This technology allows the generation of light pulses with very high peak power (gigawatts), which is much higher than what would be produced with the same laser if the NdYag laser works.

Picocare 450 Laser: Picocare is a FDA approved picosecond Nd: YAG laser used to treat various pigment disorders, treat scars, nail fungal infection and remove colored tattoos.

Picocare 450 laser: Picocare is a US FDA approved Picosecond Nd: YAG Laser that is used for treating a wide array of pigmentary disorders, scars treatment, full-color range tattoo removal and nail fungal infection. Picocare is one of the most advanced laser systems with innovative technology for faster results. Picocare is manufactured by Wontech South Korea.

7. DISCUSSION: Picosecond lasers help achieve better results by application of q-switch and Pico pulse technology to safely and effectively remove subcision scar tissues through specially designed MLA handpieces. For better photomechanical effect. Competitive analysis of picosecond laser devices facilitates companies identify determine the target groups, minimize dropout rates and increase return on investment by placing resources in the right channels / campaigns and more. Pico seconds lasers not just help in day to day data but also in tattoo removal. It is safe, effective and powerful q-switch medical laser. This study is one of the most comprehensive documentation that captures all the facts of Pico second devices in medical aesthetics markets.

About PICO CARE – An Overview

PICO CARE is a Neodymium yttrium aluminum garnet (ndyag) picosecond laser device which has been developed to treatment of pigmented lesions and permanent tattoo removal of all tattoo colors. In regards to speed and comfort, its effectiveness outperforms other devices on the market. Pico second lasers diminish any injury to skin in pigmentation removal through accurately aiming the targeted lesions. Pico Second Laser features latest Pico Pulse Technology with advanced fractional mode. Pico second laser is a rapid, safe and easy medical laser skin treatment for all types of pigment, tattoo & scar treatment

Wontech Picocare system introduces a front edge laser technology. A device capable of employing pico-second (1 million billions of a second) pulse width modulation for safe and effective treatment of a broad variety of epidermal conditions with minimal adverse effects in contrast with existing devices. Moreover, with the powerful fractional Hexa-MLA handpiece, it is now possible to treat skin conditions and rejuvenation therapy with negligible downtime. Hexa-MLA Handpieces also enable to operate surgical scars as well as hypertrophic scar and rolling-scars in a non-intrusive manner.

Moreover, with the progressive fractional Hexa-MLA handpiece, it can be utilized for light breaks to restore the skin for all skin types. One of a kind PicoCare MLA tips (little and huge spot sizes) can likewise be utilized to treat atrophic, removable skin break out scars and non-intrusive careful scars.

LIST OF MEDICAL INDICATION TREATED BY PICO CARE

- Epidermal Lesions – Nevus, Red-Freckles, Chloasma, Lentigos (age spots), solar lentigo (sunspots), Seborrheic Keratosis, etc
- Dermal-Skin Pigments – Dyspigmentation, ABNOM, Nevus, Acquired bilateral nevus of Ota-like macules, etc
- Tattoo Removal – Different colors
- Photo rejuvenation – Age Spots, Dry skin, uneven skin texture, rhytides, , macules, dyschromias-hyperpigmentation, etc
- Ugly Scars – Boxscar, Chicken-pox scars, Ice pick, Boxcar, etc
- Nails – Onychodystrophy

BENEFITS OF PICOCARE- PICO SECOND LASER

- Break all color of the tattoo
- More photomechanical - less thermal effect on skin
- Better results (safe, effective, easy)
- Specialized handpiece
- Hexa MLA Technology
- Removes subcision scar tissues

COMPETITIVE LANDSCAPE AND ATTRIBUTE ANALYSIS

“The medical aesthetic devices market is highly competitive and consists of a number of major players. Companies like Allergan Inc., Alma Lasers, Bausch Health Companies Inc. (Solta Medical Inc.), Cutera Inc., El.En. (Asclepion Laser Technologies), Hologic Inc., Lumenis Inc., Sciton Inc., Syneron Medical Ltd, Venus Concept among others, hold the substantial market share in the medical aesthetic devices market. Picosecond lasers are the most advanced safest and effacious means of tattoo removal.”as mentioned in the report of “Medical Aesthetic Devices Market - Growth, Trends, And Forecasts (2020 - 2025)” by Mordor Intelligence.

Major Players (Key Competitors) Of Pico Second Laser Aesthetic Devices Are :

- Picocare
- Picosure
- Picoway
- Discovery Pico
- Enlighten by Cutera

Key Metrics For Comparison Of The Pico Second Lasers Are :

- Number of wavelengths
- Pulse Duration
- Peak power
- Platform
- Spot size
- Delivery system
- Irradiation type
- Max energy
- Repetition Rate
- Device Dimensions
- Weight
- Handpiece
- Certifications
- Warm up time

COMPETITIVE LANDSCAPE

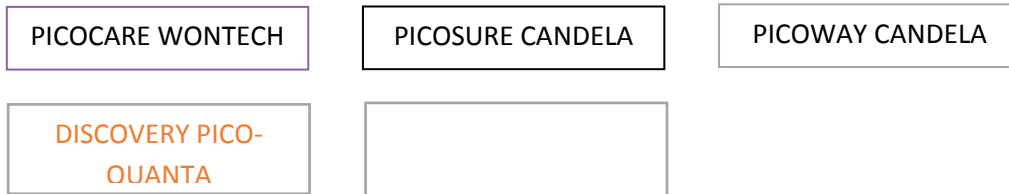
COMPETITIVE LANDSCAPE OF PICO SECOND LASERS					
Sr. No.	COMPANY NAME	BRAND NAME	System	PULSE RATE	COUNTRY ORIGIN
1	Wontech (Marketed and Distributed in India by Aakaar Medical Technologies)	PicoCare	Q-switch and Pico Pulse	1064nm@450ps, 532nm@375ps	KOREAN
2	CYNOSURE	Picosure	Pico	532nm, 755nm @ 750ps, 1064nm	AMERICAN
3	SYNERON CANDELA	Picoway	Pico	532nm @ 375ps, 785nm @ 300ps, 1064nm @ 450ps	
4	QUANTA SYSYTEM	Discovery Pico	Hybrid pico second-nano second	370ps @ 532nm, 450 ps @ 1064nm, 6ns @ 694nm	ITALIAN
5	CUTERA	Enlighten	Pico + nano	750 ps& 2 ns	

ATTRIBUTE ANALYSIS

PICO SECOND LASER DEVICES					
PARAMETERS	PICOCARE	PICOSURE	PICOWAY	DISCOVERY PICO	ENLIGHTEN
NUMBER OF WAVELENGTHS	1064nm & 532nm + 595, 660nm	532nm (laser pump handpiece), 755nm, 1064nm (laser pump handpiece)	532nm, 785nm, 1064nm	2 wavelengths – 532nm, 1064nm, (694nm is nanosecond)	532/1064 nm
PULSE DURATION	1064nm@450ps, 532nm@375ps	532nm, 755nm @ 750ps, 1064nm	532nm @ 375ps, 785nm @ 300ps, 1064nm @ 450ps	370ps @ 532nm, 450 ps @ 1064nm, 6ns @ 694nm	750 ps& 2 ns
PEAK POWER	1064nm@1.3GW, 532nm@0.8 GW	532nm, 755nm @ 0.36gw, 1064	532nm @ 0.53gw, 785nm @ 0.33gw, 1064nm @ 0.90gw	1.8gw @ 1064nm, 0.9gw @ 532nm	0.4 GW, 0.8 GW
PLATFORM	Picosecond, Q-switch	Picosecond	Picosecond platform	Hybrid picosecond/nanosecond platform	pico + nano
SPOT SIZE	max 10 mm, zoom h/p 2-20mm, hexamla h/p 3-5mm, 6-10mm, collimation h/p 7 mm	Zoom: 2-6 MM, Fixed 6mm, 8mm, 10 mm	10, 9, 8, 7, 6, 5, 4, 3, 2 mm spot sizes	2, 3, 4, 5 (square) & 2, 4, 6, 8 (round)	2-8 mm
DELIVERY SYSTEM	Articulated Arm	Articulated Arm Zoom & Fixed	Articulated Arm with zoom handpiece	Articulate arm with detachable handpiece	Articulated Arm
IRRADIATION TYPE	ND:YAG	ND:YAG	ND:YAG	ndyag, ruby	ND:YAG
MAX ENERGY	1064nm@600mJ,	165-200mJ	400mJ, 200mJ	450ps@800mJ,	300 mJ/600mJ

	532nm@300mJ		(Frquency Doubled)	370ps@300Mj	
REPEATION RATE	Single, 1-10 Hz	1, 2, 5, 10 Hz	single 1.2.3.4.5.10 Hz	upto 10Hz	single 10 HHz
DIMENSION	450 x 939 x 908 (W x D x H)mm	N.A	107cm H x 46cm W x 69cm D	530mm W x 1043mm D x 1060 mm H	540mm x 525mm x 1400mm
WEIGHT	90 kg	117 KG	125 kg	150 kg	88 lbs
HANDPIECE	ZOOM H/P, HEXA MLA H/P, DYE H/P, COLLIMATION H/P	ZOOM H/P, FIXED H/P	ZOOM H/P	TWAIN H/P	MLA H/P
CERTIFICATIONS	FDA, CE, TGA, MINISTRY OF FOOD AND DRUG SAFETY	NONE	NONE	NONE	NONE
Electric Input Requirement		30 AMP	30 AMP	3.7 KVA	30 AMP
Electrical Power		200-240 V, 4.5 KVA, 50/60 Hz, single phase	200-240 VAC, 50/60 Hz, single phase	200-240 VAC, 50/60 Hz	110 VAC
Warm Up Time		30-50 minutes	2 minutes	N.A	2 minutes
BRAND	WONTECH	CYNOSURE	SYNERON CANDELA	QUANTA SYSTEM	CUTERA

SWOT ANALYSIS



PICOCARE

- **STRENGTH** : FDA Approved, Multiple Specialized Handpieces, Spot Size, Lightweightness, Product Features, Economical Cost.
- **WEAKNESS** : Lesser Investment In Branding, PR And Advertisements, Less Product Range For Lower Middle Class
- **OPPORTUNITY** : Domination Of Indian And Worldwide Market Since There's A Large Base Of Customer Looking For Skin Rejuvenation Treatments, Huge Untapped Market, Rising Disposable Income, Urbanization, Environmentally And Ethically Responsible
- **THREAT** : Competitors Outreach

PICOSURE

- **STRENGTH** : Added Brand Value Attached To It, Globally Known For Tattoo Removal, Aggressive Promotion
- **WEAKNESS** : Costly , Slow Startup Time, Heavy,
- **OPPORTUNITY** : Can position itself as a potential device for tattoo removal, huge financial investment
- **THREAT** : Other Viable Options Available

PICOWAY

- **STRENGTH** : Added Brand Value Attached To It, Globally Known For Tattoo Removal, Aggressive Promotion
- **WEAKNESS** : Costly System, Heavy, Bad Beam Profile
- **OPPORTUNITY** : Can capture a good amount of population seeking tattoo removal
- **THREAT** : Other Viable Options Available

DISCOVERY PICO

- **STRENGTH** : Twain (Fractional) Handpiece
- **WEAKNESS** : Too Expensive, Heavy
- **OPPORRTUNITY**: Can Target And Spend Lavishly For Expansion And Convincing The Customer.
- **THREAT** : Many newer more economical options available

ENLIGHTEN

- **STRENGTH** : Hybrid Technology (Pico + Nano)
- **WEAKNESS** : Heavy, Costly
- **OPPORTUNITY** : Potential Market Player
- **THREAT** : Other Viable Options Available

COMPETTITIVE SCENARIO

STRATEGIC POISITIONING

- PICOCARE : Cost Advantage, Focused on All Priorities
- DISCOVERY PICO : Strategic Targeting, Differentiation
- PICOSURE : Visibility And Reach
- PICOWAY : Visibility And Reach
- ENLIGHTEN : Differentiation (Pico + Nano)

PICOCARE MARKET SEGMENTATION

- AGE : Buyer Group Ideally 20+ Age
- SEX : Male and Female
- INCOME GROUP : Medium to High
- EMPLOYMENT : Dermatologist, Beautician, Cosmetologist, Spa Manager, Doctors
- ETHICITY : Indian Skin Particularly For Skin Treatment

(OTHERS)

ETHNIC GROUP : Already Fair Skin, For Tattoo Removal

KEY COMEPTITIVE ADVANTAGE OF PICO-SECOND DEVICES

- PICOCARE : Features
- PICOSURE : Investment Cost, Robust Promotions, Visibility
- PICOWAY : Visibility And Reach
- DISCOVERY-PICO : Planning And Execution, High Investment Cost
- ENLIGHTEN : Hybrid System

MAARKETING POSITIONING STRATEGY (tagline)

PicoCare: Beyond nano, experience real PICO.

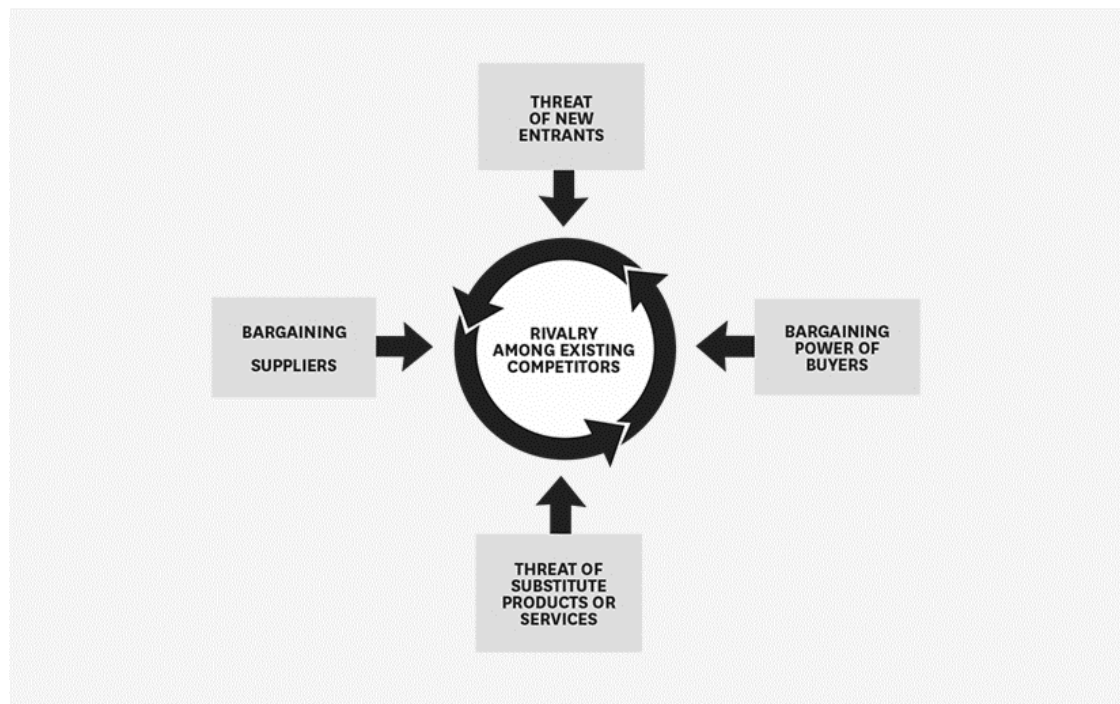
PicoSure: Shattering the Past, Revealing the Future.

PicoWay: The complete picosecond platform.

Discovery Pico: Are you ready for the DISCOVERY PICO Revolution?

Enlighten: The answer is clear.

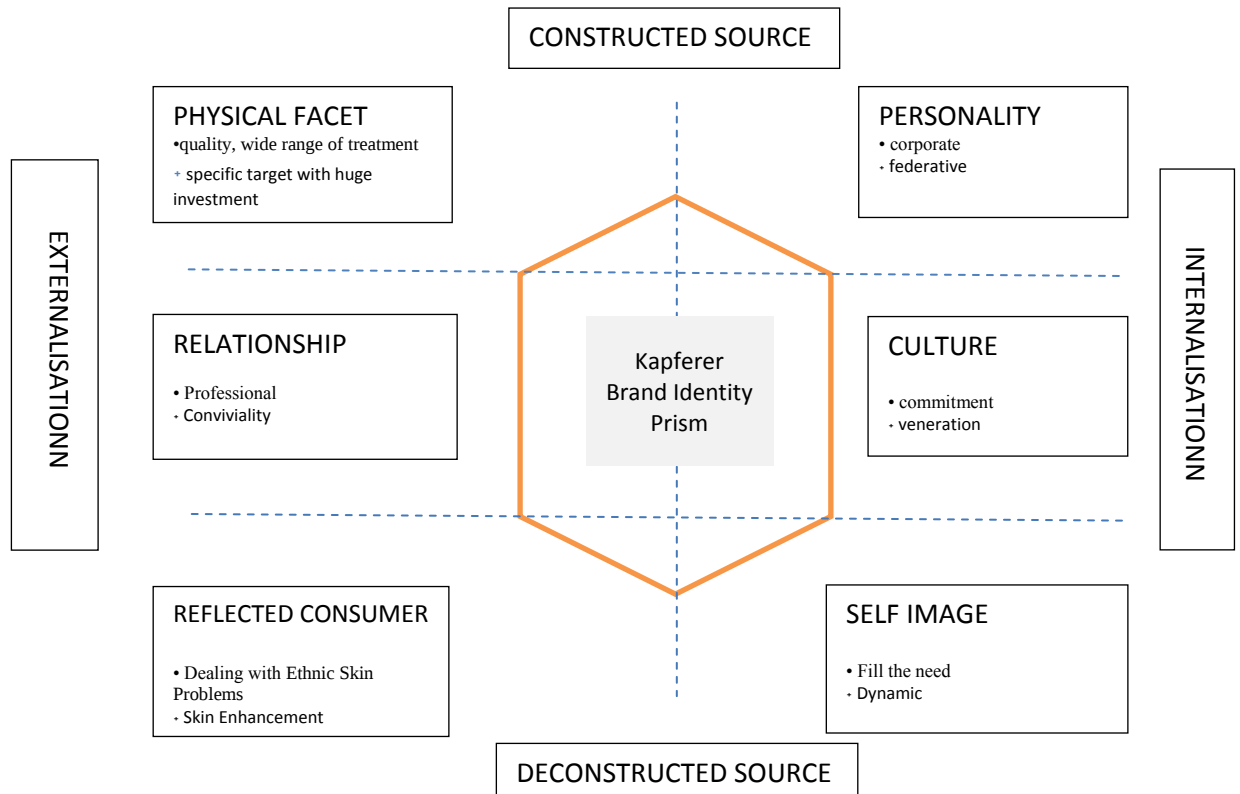
PORTER 5 MODEL FOR PICOCARE



Porter's Five Force Analysis For Picocare:

1. Threat of New Entrants: **LOW**
2. Bargaining Power of Buyers/Consumers: **HIGH**
3. Bargaining Power of Suppliers: **MEDIUM**
4. Threat of Substitute Products: **LOW**
5. Intensity of Competitive Rivalry: **HIGH**

KAPFERER BRAND IDENTITY PRISM



WHERE,
 “•” is for Picocare
 “+” is for Competitors

TERMINOLOGIES

PHYSICAL FACET :

A set of physical characteristics of a brand that is created in the minds of people when brand names are mentioned. Kapferer explained that this aspect must be seen as the basis of the brand.

Physical Facet may include either recognizable logo, brand characteristics, distinctive color/ symbol or product offering.

PERSONALITY

Attribute or Style Unique To The Brand

CULTURE

Corporate environment and relations with the customers

RELATIONSHIP

Relationship between brand and the customer

REFLECTION

Reflection is a set of stereotypical beliefs or characteristics of the target group that are often touched or highlighted in advertising and marketing techniques.

SELF IMAGE

How customers of certain brands see themselves and how they relate to them.

3C RULE (CUSTOMER NEED, CORPORATION & COMPETITORS)

PICOCARE

- CUSTOMER : From Treating Skin Conditions To Skin Rejuvenation As Well As Tattoo Removal
- CORPORATION : Established Organization
- COMPETITOR : Harsh-Medium Competition

PICOSURE

- CUSTOMER : Tattoo Removal Mostly
- CORPORATION : Established
- COMPETITOR : Low Competition

PICOWAY

- CUSTOMER : Tattoo Removal
- CORPORATION : Established
- COMPETITOR : Medium Competition

DISCOVERY PICO

- CUSTOMER : Indicate for Tattoo Removal Mostly
- CORPORATION : Established,
- COMPETITOR : Medium Competition

ENLIGHTEN

- CUSTOMER : Similar To Picocare
- CORPORATION : Established
- COMPETITOR : Medium Competition

CONCLUSION:

The Global Aesthetic Market is anticipated to surge by \$7.64 billion during 2020-2024 advancing at a CAGR of 7% during 2020-2024.

Skin problems are seen in all ethnic groups with varying frequency. Differential prevalence of social, cultural, genetic and environmental factors is cause of these skin problems. The increasing population in India and rising urbanization market makes India as one of the best markets to invest in, Indian market is dominated with people with ethnic skin which is highly susceptible to skin problems. Hence, advanced aesthetic laser like Picocare can prove to be a revolution in improving the life of the people by helping them get rid of their permanent problem lesions, mole, nevus, freckles, melasma, age spots, hyperpigmentation, birthmarks etc., with a permanent solution, all because of advancement in technology.

Picocare have added advantages over other Pico second laser system. It is better with regards to efficaciousness, safety and span of treatment possibilities

EFFICACIOUSNESS

- Picocare - Picosecond laser is unmatched the best when it comes to speed (Picocare deliver 450 picosecond pulse duration)
- High Peak strength of 1.33 G.
- HEXA focus lenses concentrate up to 15 times more energy at each point.

SAFETY

- Pigments break down into very small particles, which can be more easily removed from the body.
- A laser-induced second optical breakthrough only breaks the target.

TREATMENT POSSIBILITIES

- Picocare has a wavelength of 1064 nm and allows you to easily remove a variety of tattoo colors, including harsh green and blue.
- Laser Treatment through Picocare - picosecond lasers can treat various skin diseases, unwanted permanent tattoos, Ota nevus, dyspigmentation, permanent lesions, etc.

PICOCARE is a rapid, safe and easy non-surgical, non-invasive medical laser skin treatment of treating various dermatological such as & full body hair removal.

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