



Research Article

Background and Growth of Cosmetic Surgeons in A Cosmetic Surgery Group

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Abstract

Background: Our research group is one of the largest cosmetic surgery groups in Japan. To achieve high patient satisfaction in Japan, it is important to develop an educational system for each doctor. In this study, we summarized the backgrounds of doctors in our group and investigated how each background was related to the growth of cosmetic surgeons. **Methods:** We included 243 doctors enrolled in our group as of March 2023 and examined the impact of various factors on the learning curve of doctors as cosmetic surgeons. **Results:** Of the 243 subjects, 154 (63.3%) were male and the median age was 33 years old (30–37.5). 68 (28.0%) were trainee doctors, 110 (45.3%) were certified doctors, and 65 (26.7%) were preceptors. There was no difference in the period from trainee doctors to certified doctors or preceptors based on gender, area, or Synthetic Personality Inventory scores. Although medical history and surgical experience affected the period from a trainee doctor to a certified doctor, the difference was approximately two months and constant skills can be acquired as a cosmetic surgeon within a few months after joining the group. **Conclusions:** Our group's doctors had a wide age range and changed their specialization from various departments to cosmetic surgery, regardless of their surgical experience. Notably, the number of procedures and the substantial system of doctors' education has significantly and rapidly grown for cosmetic surgeons.

Keywords: Cosmetic surgery; Cosmetic surgeon; Education; Background of doctors; Growth of doctors

Introduction

Advances in cosmetic surgery, including technological improvements with the expansion of capabilities and safety profile optimization, have led to an increased awareness of cosmetic surgery [1,2]. Additionally, in recent years, celebrities and influencers have increasingly publicized cosmetic surgery,

resulting in an increase in cosmetic surgery demand promoted by the expansion of social media in Japan. As the demand for cosmetic surgery has expanded, the number of cosmetic surgeons in Japan has increased in recent years. According to data released by the Japan Medical Association (JMA), the number of cosmetic surgeons doubled from 427 to 942 between 2010 and 2020 [3], and might have continued to increase since 2020.

Our group is the fastest-growing and largest cosmetic surgery group in Japan. As of March 2023, the number of doctors enrolled

in our group is 243, which is overwhelmingly large for a single group and will steadily increase. To provide high-quality services that meet the needs of patients at nationwide clinics such as ours, it is important to standardize procedures and build an education system for doctors. We repeated trial and error exercise for the best education system; in fact, our group currently uses a system called Operable table for standardized procedures and gradual skill acquisition for doctors (Figure 1). Additionally, for the management of doctors, we defined certified doctors as those who have a certain level of knowledge and skills regarding procedures, counselling, and management; are able to guide trainee doctors and preceptors who have advanced skills; and can educate trainee doctors and certified doctors. These systems can enable the steady growth of doctors in our group as cosmetic surgeons and provide stable services to patients.

The American Board of Cosmetic Surgery (ABCS) has a board-certification system in the United States. However, many

cosmetic surgeons were reported to actually perform procedures beyond the scope of their qualifications [4]. In Japan, two academic societies, which have a board-certified system, are widely known: the Japan Society of Aesthetic Plastic Surgery (JSAPS), which consists of board-certified plastic surgeons; and the Japan Society of Aesthetic Surgery (JSAS), which does not require qualification for being a board-certified plastic surgeon. However, these board-certification systems are not so important to cosmetic surgeons in Japan. The procedures and skills of doctors vary greatly in each institution, and the presence of qualifications does not necessarily reflect the level of doctors.

Our group is one of the largest cosmetic surgery groups in Japan and has achieved high patient satisfaction throughout Japan. In this study, we summarized the backgrounds of doctors in our group and investigated how each background was related to the growth of cosmetic surgeons.

STEP 1			STEP 2			STEP 3		
Learns immediately after			Learns within 3 months after			Learns within 6 months after		
Learning rate			Learning rate			Learning rate		
0.00%			0.00%			0.00%		
	Proficiency	Signature		Proficiency	Signature		Proficiency	Signature
BT	Forehead		Eye	Interrupted buried suture*		Eye	Upper eyelid fat removal	
	Between the eyebrows		Face-lift	Mitt thread lift			Transconjunctival orbital fat removal	
	Outer corner of the eye		BT	Shoulder			Epicanthoplasty	
	Nose nostril/nose back			Calf			Interrupted buried suture removal	
	Gills			Clummy			Phaxis (buried)	
	Jaw			Hyperhidrosis			Continuous buried suture	
	Armpit		Hy	Lip		Nose	Rhinoplasty	
Hy	Nasolabial fold			Cheek			Nasal Wing Reduction (buried)	
	Corner of mouth			Face wrinkles			Nasal Wing Reduction (incision)	
	Nose			Orbital rim		Jaw	3D E-line therapy	
	Jaw			Temple		Others	Phantomized line	
Male	Coring-out procedure			Between the eyebrows			Suction shaving method	
BNLS	Face			Face bags		Face-lift	Spring thread lift	
	Body			Forehead		Outline	Buccal fat removal	
GF	AGA			Outer corner of the eye				
	Face			Dull cheek				
				Above the eye				
			Bust	Hyaluronic acid				
			Male	Incision for a smile*				

Figure 1: The operable table in our group. STEP 1 to STEP 3 is extracted from STEP 1 to STEP 6. BT, Botox; Hy, hyaluronic acid; BNLS, BN Liposculpting Solution; GF, growth factor; AGA, androgenic alopecia.

Methods

Data Acquisition

We included 243 doctors who were enrolled in our group as of March 2023, excluding those who had retired. We examined the impact of factors such as age, sex, Synthetic Personality Inventory (SPI) score at the time of employment (described later), work area, and previous specialization on the learning curve of doctors working as cosmetic surgeons. Regarding previous specialization, non-surgeons were defined as doctors who have no surgical experience other than medical interns and cosmetic dermatologists.

Trainee doctor/Certified doctor/Preceptor

Our group uses an education system called Operable table to evaluate skill acquisition. STEP 1 to STEP 3 were extracted

from STEP 1 to STEP 6 in Figure 1. After the procedure, the instructing doctor described the evaluation as follows: ×: Cannot perform the procedure; △: Has performed the procedure before; □: Can perform the procedure but must be confirmed by a senior doctor; and □: Can perform the procedure at their own discretion. After joining our group, a trainee doctor is defined as a doctor who is not certified as a cosmetic surgeon. A certified doctor is a doctor who is technically able to perform procedures in STEP 1 and 2-including injection of Botox and hyaluronic acid, removal of moles and warts, and the interrupted buried suture-and can guide trainee doctors. Additionally, skills regarding counselling, self-branding through social networking services (SNS), management, and positivity were evaluated. A preceptor is defined as a doctor who can perform procedures up to STEP 3 and can instruct trainees and certified doctors. Moreover, preceptors need to be able to

operate their own clinic and have a higher level of self-branding and management.

SPI

The SPI is an aptitude test created by the Japanese company Recruit Management Solutions. SPI measures personality traits and basic intellectual abilities and can determine not only the personality of the target person but also the kind of work they are suitable for and what kind of organization makes them feel comfortable. The SPI can comprehensively evaluate basic ability, work adaptability, and organizational adaptability, and classify the target person into the following five levels: 2, 4, 6, 8, and 10.

Statistical Analyses

All statistical analyses were performed using R software (version 3.5.0). The Mann–Whitney U test was used to examine whether there was a significant difference in the period required to become a certified doctor or a preceptor for each background, such as sex, age, SPI, work area, and previous specialization. Statistical significance was set at $p < 0.05$.

Results

The doctors’ background in our group

The doctors’ backgrounds are summarized in Figure 2. Of the 243 subjects, 154 were male (63.4%) and 89 were female (36.6%), and the median age was 33 years old (30–37.5). The median enrolment period was 11 (6.5–23); of them, 68 (28.0%) were trainee doctors, 110 (45.3%) were certified doctors, and 65 (26.7%) were preceptors. Regarding the work area of doctors, although the majority of doctors worked in Kanto area (50.6%), including Tokyo, and Kansai area (24.7%), including Osaka, they were also distributed in local cities (Kyushu [9.5%]; Chubu [7.4%]; Tohoku [3.3%]; Chugoku/Shikoku [2.5%]; Hokkaido [2.1%]). Moreover, regarding SPI scores, 42 (17.3%) doctors scored 8 points, 140 (57.6%) scored 6, 55 (22.6%) scored 4, and 1 (0.8%) scored 2. As a previous specialization before changing to a cosmetic surgeon, medical intern was the most at 58 (23.9%), followed by 24 plastic surgeons (9.9%), 18 internists (7.4%), 17 general surgeons (7.0%), and 15 anesthesiologists (6.2%).

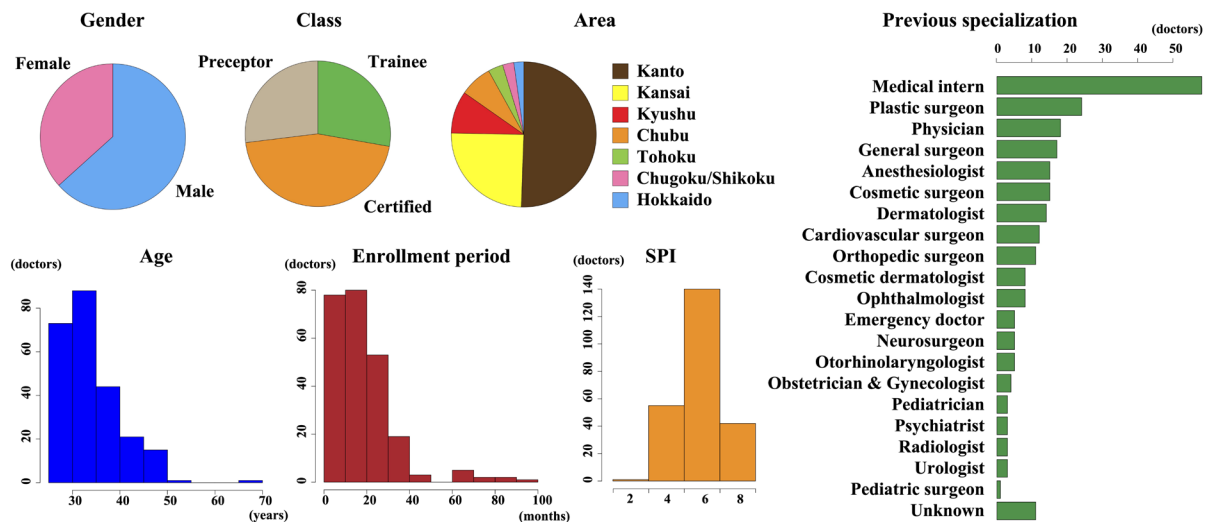


Figure 2: The doctors’ background in our group.

Period from trainee doctor to certified doctor

The period from trainee doctor to certified doctor was examined for each background (Figure 3). The median period for male and female doctors was 4.0 (3.0–6.0) months and 5.0 (4.0–6.0) months, respectively—so there was no significant difference. Although the median period was 4.0 months in Kanto, Kansai, and Chubu, and 5.5 months in Chugoku/Shikoku/Kyushu and Tohoku/Hokkaido, there was no significant difference. The median period was 4.0 months among all SPI score groups, and no significant differences were observed. However, doctors with a score of eight tended to be certified for a shorter period than those with a score of four ($p = 0.1074$). To some extent, age is considered to reflect the years of experience as a doctor. The period from trainee doctor to

certified doctor was 5.0 (4.0–5.25) months in doctors aged 25 to 30 years old, 4.0 (4.0–6.0) months for 31 to 35, 4.0 (3.0–4.5) months for 36 to 40, and 3.0 (2.25–4.75) months for 41 to 50; notably, the period was significantly shorter in older doctors. Compared to previous specializations, the period was 5.0 (4.0–7.0) months in medical interns, 5.0 (4.0–6.5) months in cosmetic dermatologists, and 5.0 (3.75–6.0) months in non-surgeons. Further, the period was 4.0 (3.0–4.5) months in surgeons, 3.5 (3.0–4.0) months in plastic surgeons, and 3.0 (3.0–4.0) months in cosmetic surgeons; in particular, the period was significantly shorter in doctors with surgical experience. However, even non-surgeons tended to spend less time becoming certified doctors than did medical interns ($p = 0.09285$).

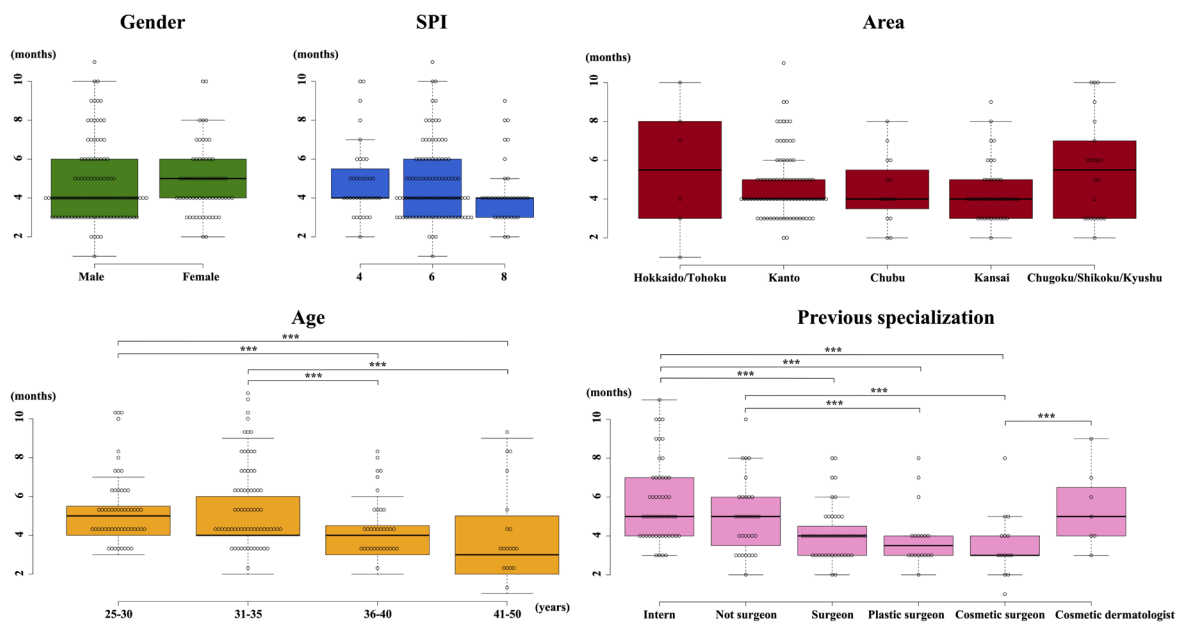


Figure 3: The period from a trainee doctor to a certified doctor in each background. *** indicates statistical significance.

Period from trainee doctor to preceptor

The period from trainee doctor to preceptor was examined for each background (Figure 4). The median period for male and female doctors was 14.0 (13.0–17.0) months and 16.0 (12.5–20.0) months, respectively; also, there was no significant difference. The median period was 15.0 (13.0–16.0) months in Tohoku/Hokkaido, 14.0 (13.0–17.75) months in Kanto, 15.0 (13.0–17.0) months in Chubu, 14.5 (12.25–18.5) months in Kansai, and 13.0 (12.5–17.0) months in Chugoku/Shikoku/Kyushu, and there was no significant difference. The median period was 15.0 (14.0–18.0) months in doctors with a score of 4, 13.0 (12.25–19.0) months in doctors with a score of 6, 15.0 (12.0–17.0) months in doctors with a score of 8, and there was no significant difference. The period from trainee doctor to certified doctor was 17.0 (13.25–19.75) months in doctors aged 25 to 30, and 15.0 (13.0–17.0) months for those 31 to 35, 14.0 (13.0–20.0) months for 36 to 40, and 13.0 (12.0–15.0) months for 41 to 50; as such, there was significant difference between doctors aged 25 to 30 and aged 41 to 50 ($p = 0.03262$). Regarding previous specialization, the period was 17.0 (13.5–19.0) months for medical interns, 16.5 (14.25–19.75) months for non-surgeons other than medical interns and cosmetic dermatologists, 14.0 (12.0–19.25) months for surgeons, 14.0 (13.0–16.0) months for plastic surgeons, and 11.0 (5.0–13.0) months for cosmetic surgeons; specifically, the period for cosmetic surgeons was significantly shorter than other doctors.

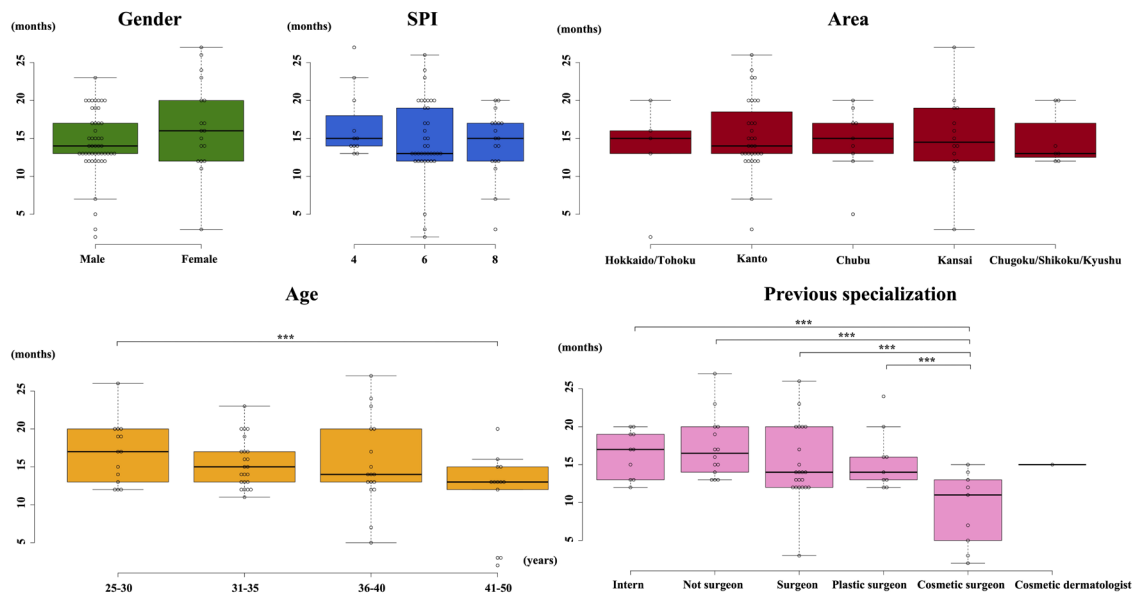


Figure 4: The period from a trainee doctor to a preceptor in each background. *** indicates statistical significance.

Discussion

In 2018, board-certified plastic surgeons performed 17 million cosmetic surgery procedures in the United States, an increase of 160% from a decade ago [5]. This increased demand for cosmetic surgery has attracted both physician and non-physician providers to the aesthetic marketplace [6]. Once primarily the domain of board-certified plastic surgeons, aesthetic procedures are now performed by increasing numbers of surgeons (e.g., oral surgeons), non-surgeon physicians (e.g., dermatologists), and other providers (e.g., physician assistants) [6-8]. Similar to the United States, in Japan, the number of cosmetic surgeons has been increasing as the demand for cosmetic surgery has expanded. In addition to plastic surgeons, doctors from various backgrounds have become cosmetic surgeons and joined our group. Our group is one of the largest cosmetic surgery groups in Japan, and we have previously reported the number of patients who underwent cosmetic procedures has sharply increased in the last few years [9]. In fact, this is associated with the rapid growth of the group, as many doctors with different backgrounds are assigned all over Japan, therefore, some approaches are necessary to obtain high patient satisfaction at all clinics. We consider the most important aspect to be the standardization of procedures and the construction of a doctorate education system.

In this study, we summarized the backgrounds and learning curves of the doctors enrolled in our group. Understanding the current status of cosmetic surgeons in Japan is difficult because

there are many cosmetic surgery groups in Japan and the number of doctors in each institution differs greatly. There are no comprehensive reports on cosmetic surgeons in Japan; therefore, this analysis is valuable in this regard. As our group is large, we have an overwhelming number of patients all over Japan; therefore, even trainee doctors can experience many procedures, resulting in rapid growth as cosmetic surgeons. Additionally, there was no difference in the sexes with regard to the learning curve of cosmetic surgeons, suggesting that an environment in which female doctors can work comfortably and grow stably was provided. Along with the trainee doctors, many doctors with experience in other medical departments often become cosmetic surgeons in the next step in their career. Doctors over 40 years of age can become cosmetic surgeons after changing their specialization. In this study, older doctors became certified doctors or preceptors significantly faster than younger doctors, which may reflect the fact that older doctors often have a clearer future vision compared to younger doctors. In most clinics, clinic directors allocate cases to doctors, so we built a system which assigns procedures according to the growth stages of doctors working at the clinic, thus, leading to the gradual acquisition of skills. Additionally, trainees and certified doctors do not necessarily belong to one clinic as they are inclined to rotate and travel to various clinics, including local cities. Increasing opportunities to study other doctors' skills and opinions can lead to the standardization of procedures and improvement in the level of each doctor. A system called operable table is useful for allocating procedures according to the skill of doctors who rotate

clinics nationwide. The technical level of a doctor can be easily understood by observing the progress of the operable table.

The use of instructional videos to teach clinical skills has been shown to improve learning outcomes compared to traditional face-to-face teaching methods [10]. Recently, education via shared surgery videos using media, such as YouTube, has become common [11], making it possible to provide more convenient and stable technical guidance at clinics nationwide. Therefore, even in local cities—for example, Hokkaido/Tohoku and Chugoku/Shikoku/Kyushu—it is possible to provide the same technical guidance as in large cities such as Tokyo and Osaka; moreover, there was no difference in the period from trainees to certified doctors or preceptors depending on the region.

Counselling skills are also required for cosmetic surgeons. Although real-world experience is considered the most important factor in improving counseling skills, opportunities for counseling education are provided in regular training—in addition to orientation at the time of joining the company—and doctors share their information and experiences. Regarding self-branding, doctors are motivated to evaluate their SNS; in fact, our group has a department dedicated to SNS and a system that constantly captures trends and provides feedback to doctors. For management skills, along with regular training, even after reaching the level of involvement in the management of a clinic as a certified doctor or preceptor, there are opportunities for constant study related to management skills at a large clinic. Thus, to train cosmetic surgeons, in addition to learning surgical techniques, various types of education are being devised.

This study has some limitations. Although the number of doctors was large, the analyzed data did not strictly reflect the entire picture of Japanese cosmetic surgeons because the data represented the current situation of a single cosmetic surgery group. Additionally, doctors' learning curves may have been overestimated because the data were only for currently enrolled doctors and did not include doctors who had retired from our group. Although age may reflect a doctor's career to some extent, the impact of the doctor's career on the period until becoming a certified doctor or preceptor has not been evaluated. Moreover, because there was no information on the period of previous specialization and because this study was based on their most recent specialization, it is difficult to evaluate the careers of doctors who have changed specializations multiple times.

Conclusions

In this study, we revealed the doctors enrolled in our group were of a wide age range and changed their specializations from various departments to cosmetic surgery, regardless of whether they had surgical experience. Our group is one of the largest

cosmetic surgery groups in Japan with clinics across the country. Notably, the number of procedures and the substantial system of doctors' education has achieved rapid and steady growth for cosmetic surgeons. Although medical history and surgical experience affected the period from a trainee doctor to a certified doctor, the difference was approximately two months and constant skills can be acquired as a cosmetic surgeon within a few months after joining the group.

Ethical Statement

The present investigation was approved by our local ethics committee (ethical review board of TCB), and written informed consent was waived because of the retrospective design. The study was conducted in accordance with the 1964 Declaration of Helsinki (as revised in Fortaleza, Brazil, October 2013).

Conflict of Interest

The authors have no financial conflicts of interest to disclose concerning the study.

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