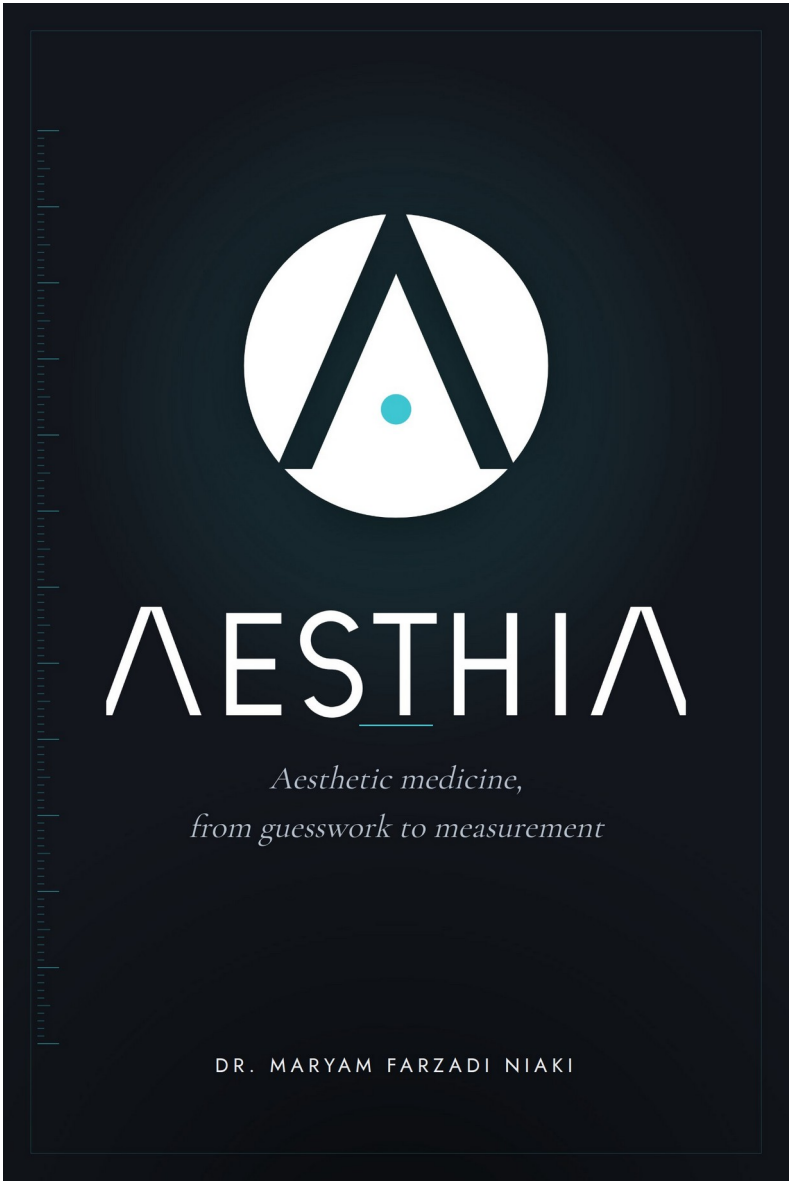

AESTHIA
Aesthetic medicine,
from guesswork to measurement
DR. MARYAM FARZADI NIAKI

A E S T H I A

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Preface

There is a sentence you hear almost every day in an aesthetic medicine practice: "I want it to look natural." The patient opens with it and the physician closes with it. The trouble is that neither of us knows exactly how many millimetres "natural" is for this particular face, where it sits, or what it should be compared against.

This book began with that question. Years of clinical work in aesthetic medicine showed me how much of the daily decision-making rests on the eye and on experience. The experienced eye is a valuable instrument and this book has no intention of belittling it. But the eye records no numbers, does not compensate for the light in the room, and three months later cannot recall exactly how much lower the left cheek sat than the right. "Before" and "after" photographs are usually taken in two different lights, from two different angles and at two different distances, and therefore prove nothing.

The book has seven chapters. The first three deal with older questions: why human beings care so much about beauty, which features make a face attractive to us, and what researchers have done so far to measure the face and the treatments used on it. Chapter four sums up what we know with confidence and what we still do not know. Chapter five shows the distance between that knowledge and the daily work of a practice. Chapter six describes the system we designed to close part of that distance, which we named AESTHIA. Chapter seven is about the ethical and legal limits of this work.

One rule governed the writing. Every claim that rests on research carries its source at the end of that chapter. Every figure quoted is the figure the authors of the paper reported. Where the evidence was thin, the book says so. The same rule applies to our own invention. AESTHIA today is a built and technically tested system, but no independent clinical trial stands behind it yet. Chapter six states precisely which parts work, which parts need real clinical data, and which claims we deliberately do not make.

The book is written for physicians and assistants working in this field, for medical and engineering students with an interest in it, and for patients who want to know, before deciding, what can actually be measured and what cannot. The text is written so that a non-specialist can follow it. Technical terms are explained in the glossary at the end.

Dr. Maryam Farzadi Niaki

Chapter One: Why People Pursue Beauty

Beauty is not a trivial subject

Beauty is sometimes dismissed as a shallow concern, the preoccupation of people with nothing better to do. The numbers say otherwise. The International Society of Aesthetic Plastic Surgery (ISAPS) recorded roughly 38 million aesthetic procedures worldwide in its survey for 2024. More than 20 million of them were non-surgical. Botulinum toxin injection, with close to 7.9 million procedures, and hyaluronic acid filler, with about 6.3 million, lead that list (ISAPS, 2025). The report is built on questionnaires returned by plastic surgeons, and the number of respondents in 2024 was nearly double the previous year, so a direct year-on-year comparison is not exact. The scale, though, is clear: millions of people every year spend time, money and sometimes their health to change how they look.

The question of this chapter is simple: why? The answer comes from several fields — developmental psychology, social psychology, economics, neuroscience and evolutionary biology. None is sufficient alone, but together they form a reasonably clear picture.

Children who have not yet learned the culture

If the standard of beauty were purely a cultural construct, we would expect infants to be insensitive to it, since they have had no opportunity to learn it. Judith Langlois and colleagues tested exactly that in 1987. They showed infants aged two to three months and six to eight months pairs of facial photographs that adults had previously rated for attractiveness. When the two faces differed clearly, infants in both age groups looked longer at the more attractive one. When the difference was small, only the older infants showed the preference (Langlois et al., 1987). The authors concluded that the finding does not sit well with the view that beauty standards are learned gradually and only from culture.

This does not mean culture has no effect. It means that part of our sensitivity to faces exists before any teaching, and that culture builds on that foundation.