



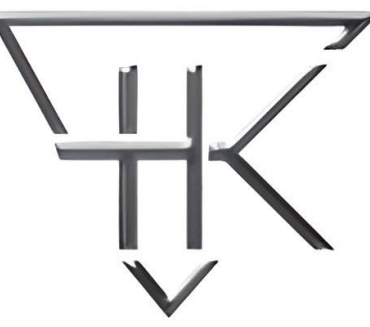
HYPERION ADVANCED TECHNOLOGY INC.

Look to the future with more confidence and health with Hyperion...

Cancer Screening and Preliminary Diagnosis Device

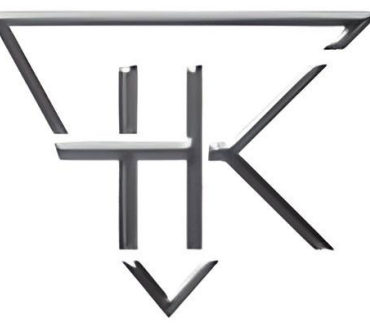
Taner KARATEKE/Founder





Did you know that one in four people closest to you, including you, has a 100% risk of developing cancer?



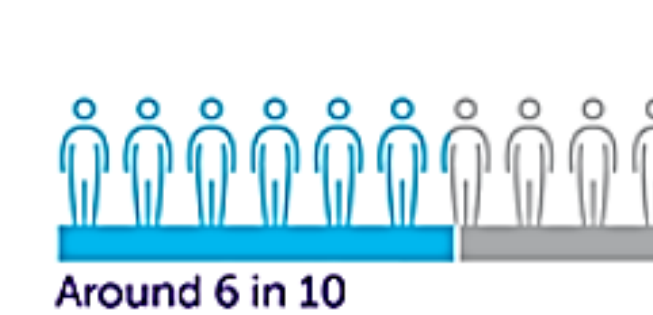


- **Cancer diagnosed at an early stage has a higher chance of being successfully treated.**
- **Early diagnosis of cancer saves lives.**
- **The earlier the diagnosis, the longer the life expectancy**

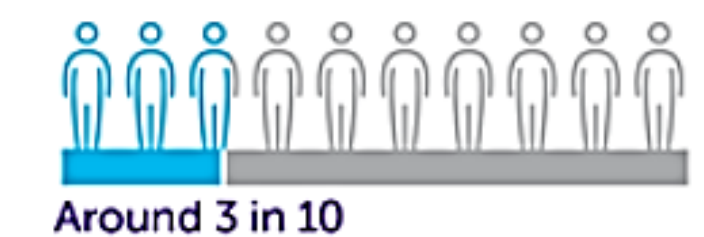
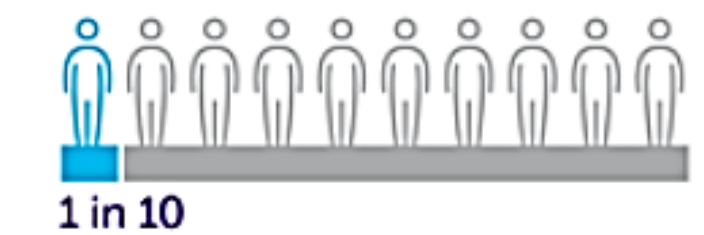
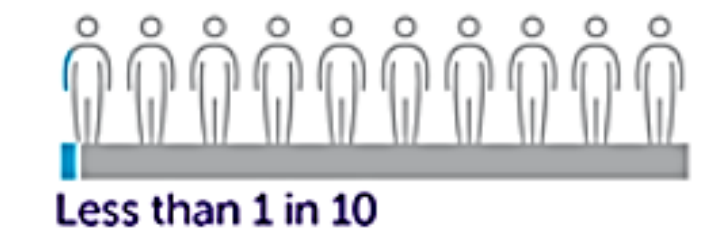
Cancer survival by stage at diagnosis

Proportion of people surviving their cancer for five years or more

Diagnosed at earliest stage



Diagnosed at latest stage

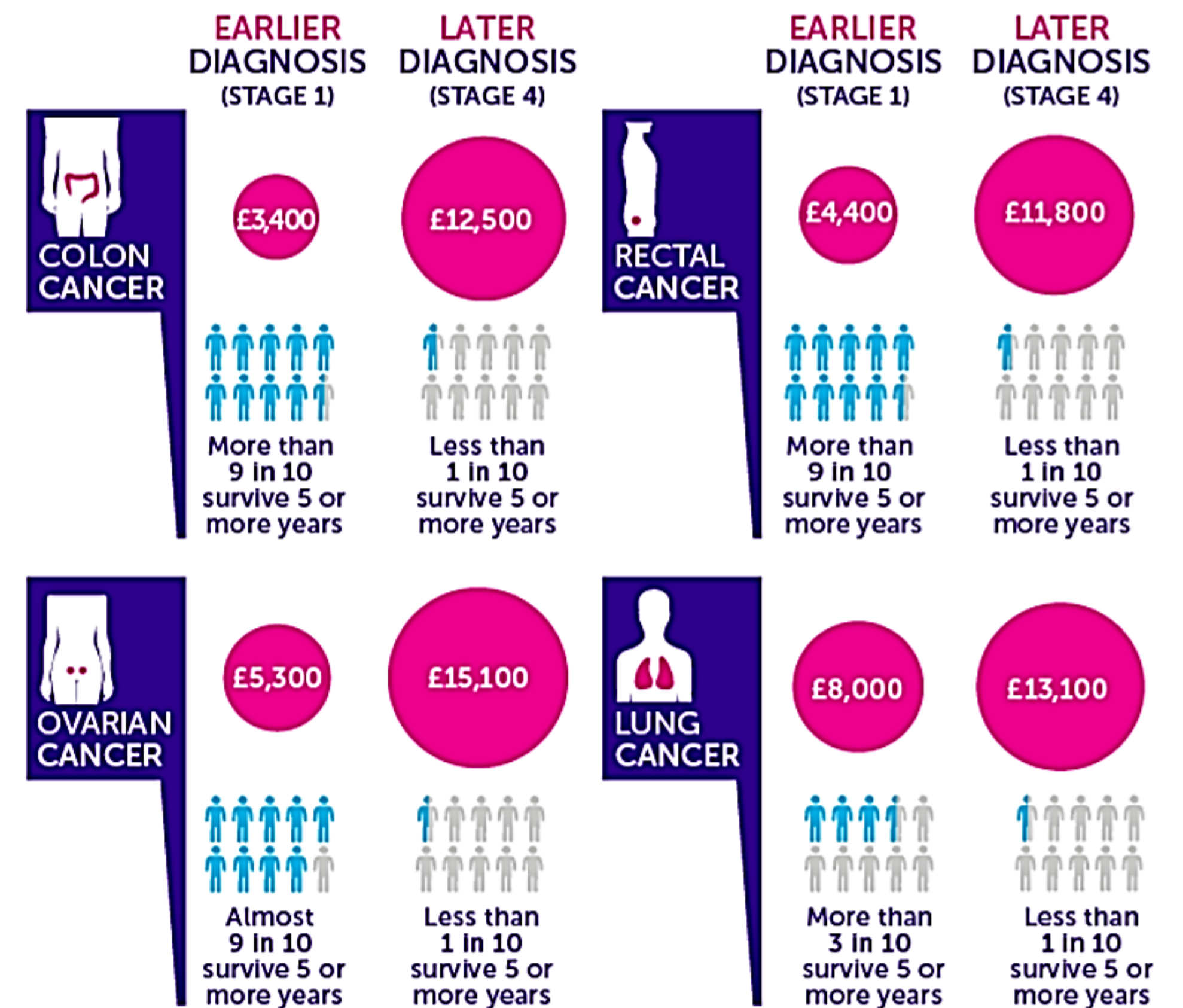


Earliest stage = stage 1; latest stage = stage 4.
Data is age-standardised net survival for adults (aged 15 to 99 years) in England in 2015-2019 followed up to 2020. Breast cancer data is for females only.
Source: Cancer survival in England, NHS Digital 2022.

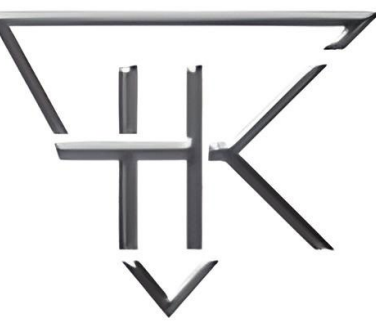
cruk.org
Together we will beat cancer

- With early diagnosis;
- The patient's survival potential increases.
- Costs for treatment and diagnosis decrease.
- Elimination of symptoms that reduce the quality of life and shorten life expectancy during and after treatment.

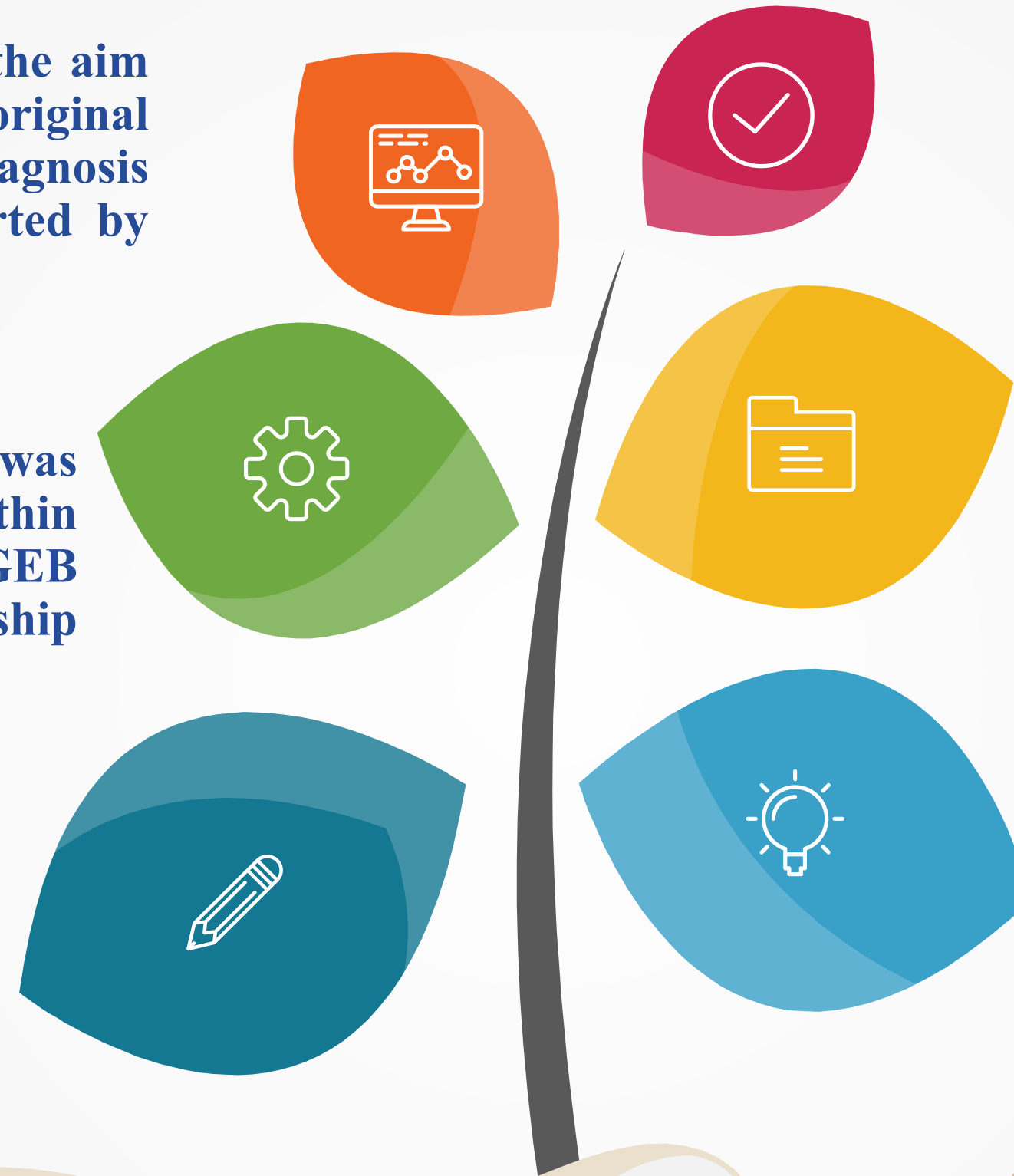
WHEN THE NHS DIAGNOSES PATIENTS EARLIER, TREATMENT COSTS MUCH LESS

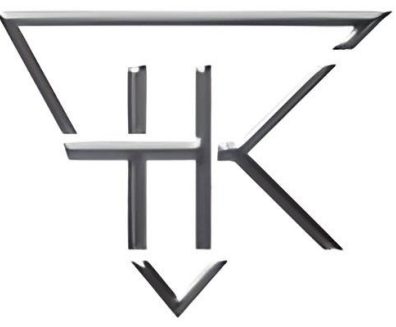


About us...



1. It was founded in 2022 with the aim of developing a completely original and innovative preliminary diagnosis device against cancer, supported by TÜBİTAK 1512.
2. In 2022, the same project was eligible to receive support within the scope of the KOSGEB Advanced Entrepreneurship Program.
3. Expanded the team from 3 to 5 people.
4. 1 national and 1 international patent applications were made for the project. It is planned to make 2 national and international patent applications.
5. In the long term, it was aimed to develop R&D projects in the fields of health, bioinformatics, defense, space and aviation, quantum technologies, nanotechnology, robotics, agriculture and energy.





Our Team



Taner KARATEKE/Lecturer

Title: Founder/CEO Modelling and Simulation Engineer

Bachelor's Degree: Physics

Master of Degree: Physics/Optical Engineering/Computer Engineering

Phd: Physics



Ertuğrul KIRAÇ/Assistant Professor

Title: Software/Hardware Engineer

Bachelor's Degree: Physics (English)

Master of Degree: Physics

**1. Phd: Defense Technologies
2. Phd: Computer Engineering (Continuing)**

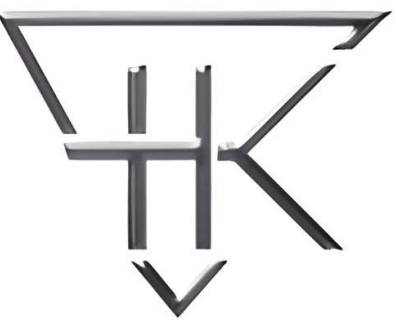


Abdullah YURTOĞLU

Title: Mechanical Design and Fluid Mechanics Engineer

Bachelor's Degree: Mechanical Engineering





Our Team



Yeliz Yılmaz BOZOK/Assoc. Prof.

Title: Clinical Oncolog

University: Medicine

Medical Specialization: Ministry of Health

**Assoc. Prof. Dr.: İzmir Katip Çelebi
University**



Elif Damla ARISAN/ Prof. Dr./Vice Rector

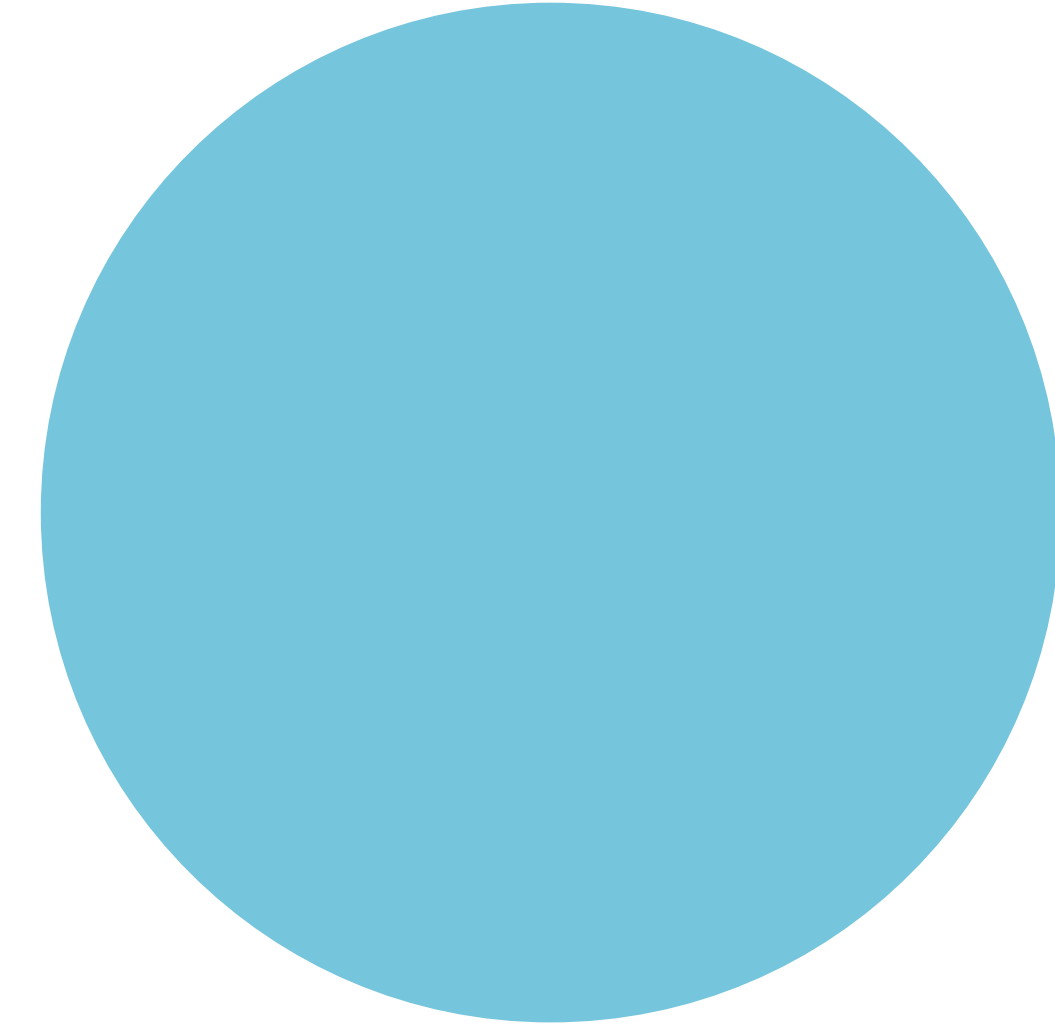
**Title: Academic Consultant/Cancer Biology
Expert**

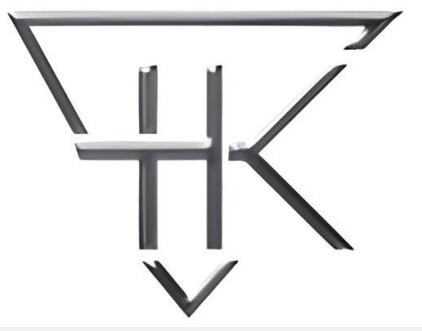
Graduate: Biology Teacher

**Master of Degree: Medical Biology and
Genetics**

Phd: Biological Sciences and Bioengineering

Post-Doc: Harvard University





Insights That Reveal Project Ideas

1



- Trying to treat cancer with conventional methods only after it reaches a certain mass size

2



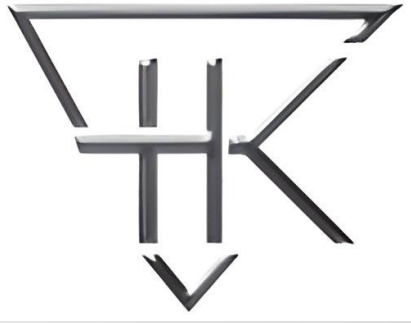
- High costs in disease diagnosis and treatment

3



- The patient's life expectancy and quality decrease at the end of the diagnosis and treatment processes.

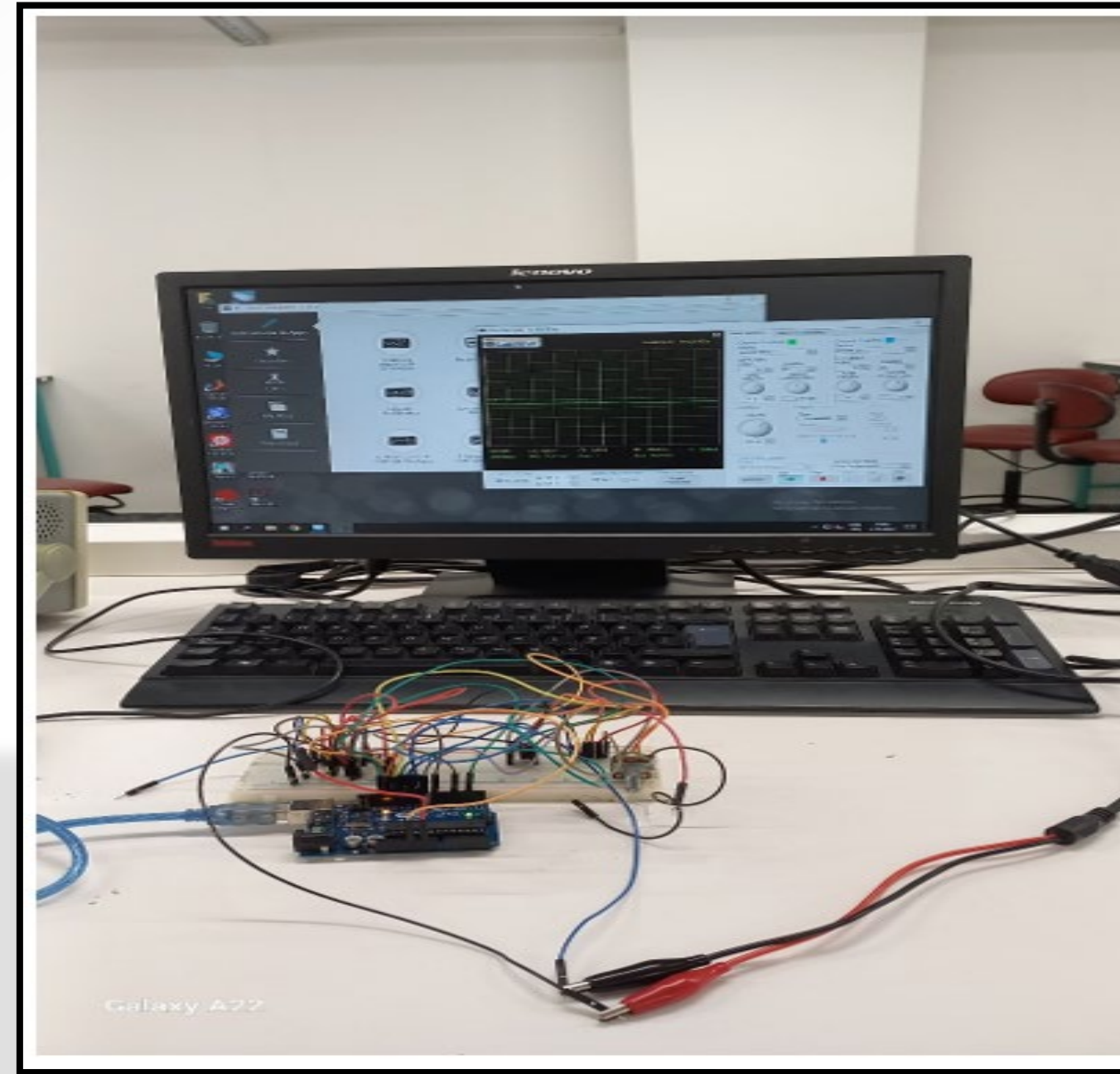
Our Solution Proposal



1. Our Value Proposition

Our Solution to the Scanning Problem

Providing biomechanical data of cancerous and healthy cells

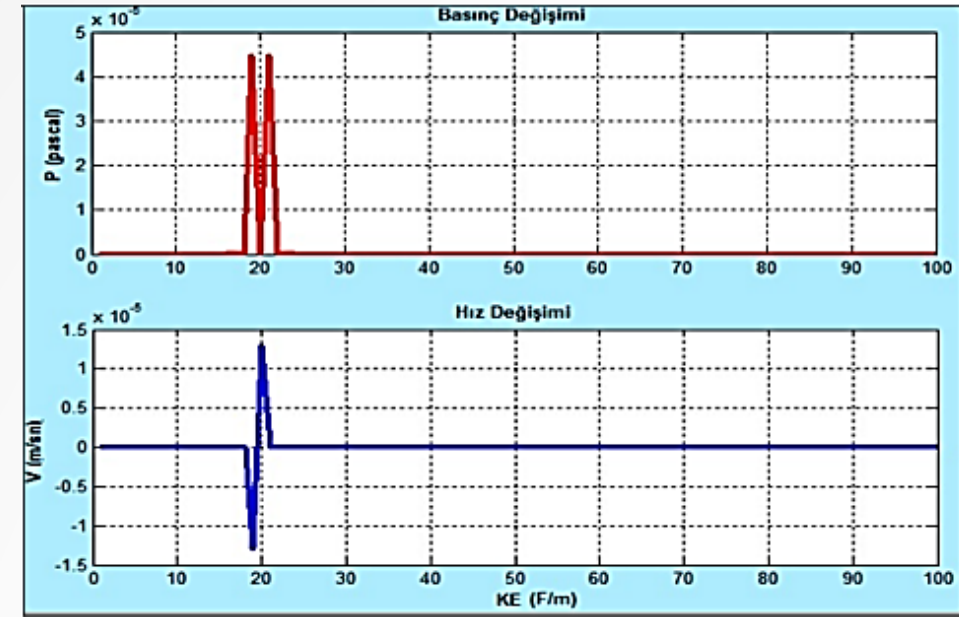


2. Our Value Proposition

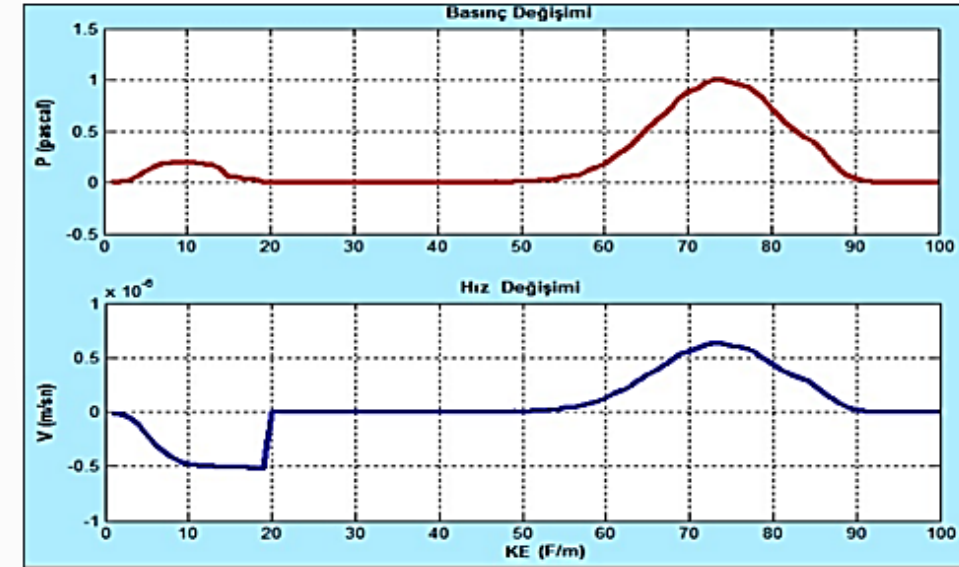
Our Solution for Preliminary Diagnosis

Determining the probability of a healthy intestinal cell turning into a cancerous cell

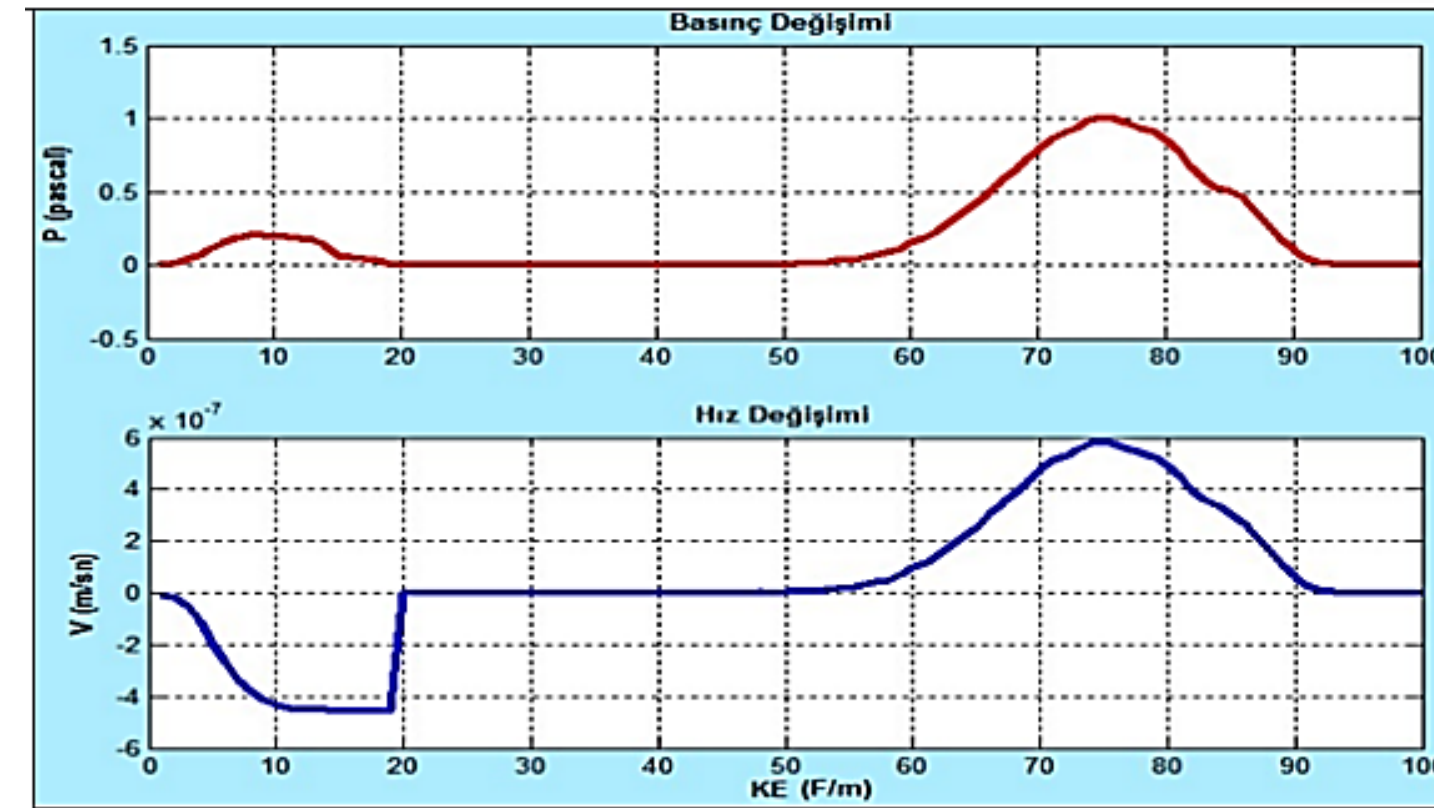
HOW DO WE DO IT?



Şekil 6. Akustik dalgaların polietilen yapısına çarpan akustik dalgadan saçılan akustik dalganın basınç ve hız değişimi (nstep = 450)

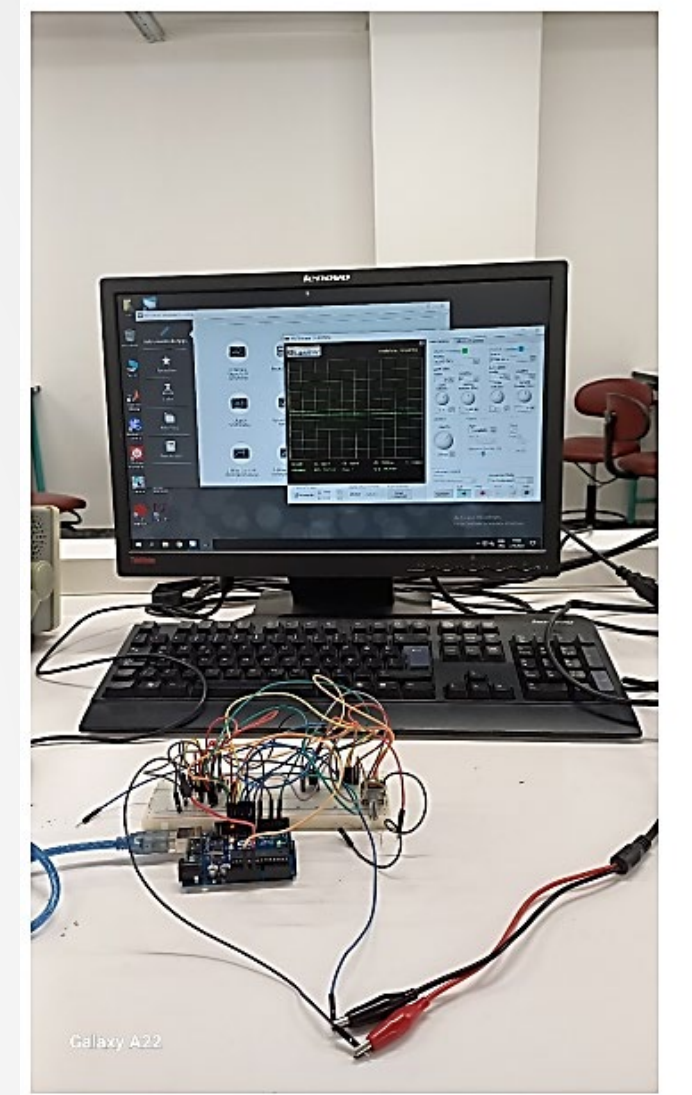


Şekil 7 Akustik dalgaların kanserli hücre yapısına çarpan akustik dalgadan saçılan akustik dalganın basınç ve hız değişimi (nstep = 450)



Şekil 8 Akustik dalgaların sağlıklı hücre yapısına çarpan akustik dalgadan saçılan akustik dalganın basınç ve hız değişimi (nstep = 450)

Şekil 7 ve 8'e göre basınç değişiminden çok saçılan dalganın hızının değişimi kanserli ve sağlıklı hücrelerin ayırtılma bilgisi hakkında bilgi vermektedir. Prototip üzerinde yapılacak geliştirmeler sonucunda aynı zamanda saçılan akustik dalga verisinin faz değişimi, genlik değişimi bilgileri elde edilerek sağlıklı ve kanserli hücrelerin ayırtediciliği hassas ve detaylı bir şekilde sağlanacaktır.



Şekil 4 Tarama cihazı ön prototipi

1

Acoustic waves sent to and scattered from the cellular structure

Detection and Processing of Scattered Acoustic Wave

2

Creating a large data bank

3

PRE-DIAGNOSIS with Machine Learning/Deep Learning method

4

Current Status & Intermediate Processes & Future Status

It started with the support we received within the scope of TÜBİTAK 1512 and KOSGEB Advanced Entrepreneurship program.

Creation of a large data bank within the scope of hospital collaborations

Performing validation and verification processes using a large data bank

Transforming a healthy cell into a cancerous cell with the appropriate machine learning method

The final product for the screening problem was developed within the scope of TUBITAK 1507.

Development of a preliminary prototype for the scanning problem of the device



1.Step

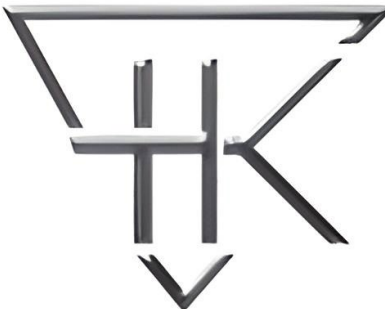


2.Step

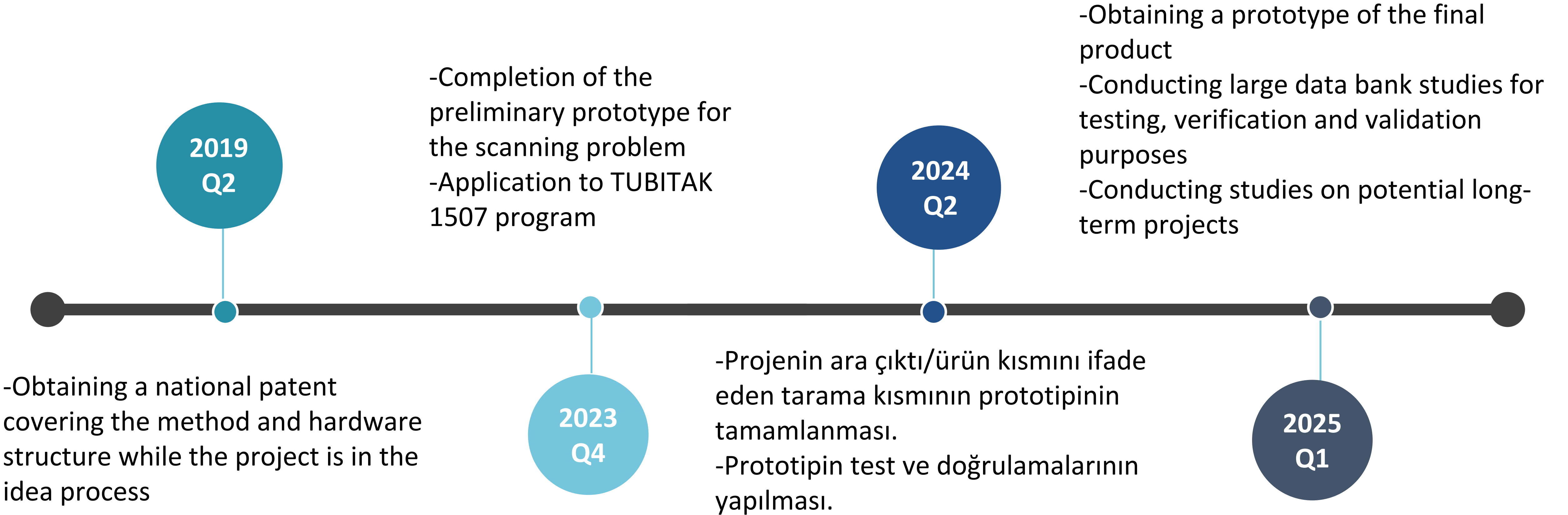


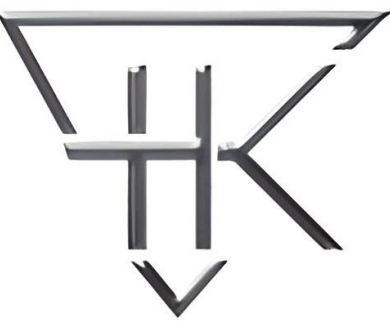
3.Step

Cancer Screening and Preliminary Diagnosis Device



Our Road Map





Strengths

- Sıfır faz ve öncesinde ön tanı koyabilmesi.
- Basit ilaç tedavisi ile kanserin tedavisinin hedeflenmesi.
- Teşhis ve tedaviye yönelik maliyetlerin azaltılması
- Ömrün uzaması

Weaknesses

- Uluslararası kanserli hücre verisine ulaşma
- Ürünün geniş kitlelerde bilimsel çalışmalarının oluşturulabilmesi için gerekli organizasyon ve maddi kaynak

SWOT Analysis

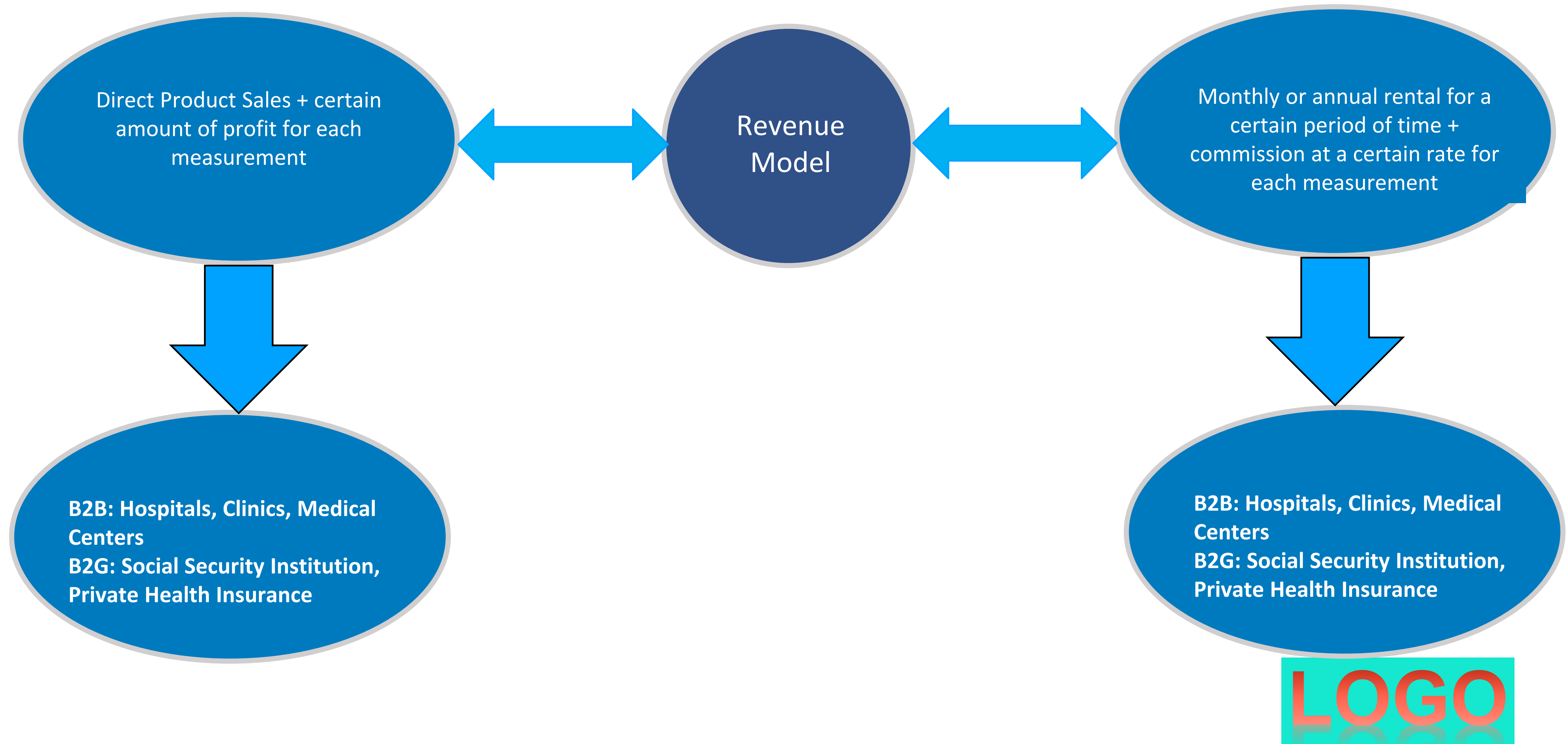
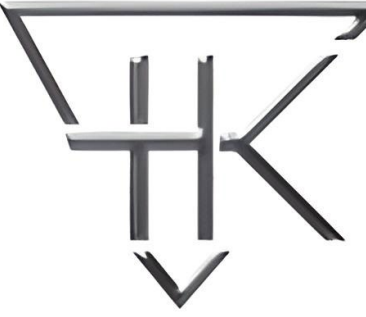
Opportunities

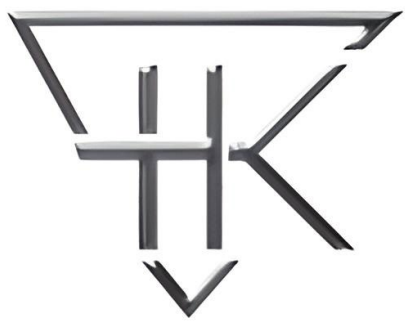
- Steady growth of the diagnostic market.
- It enables the development of potentially effective drug therapy and advanced imaging devices in the field of cancer.
- Potential for intermediate product production other than the main product as a result of the development of the project.

Threats

- Difficulty in carrying out R&D studies of the project due to financial inadequacy.
- Inability to employ the necessary human resources due to financial inadequacy.

Revenue Model



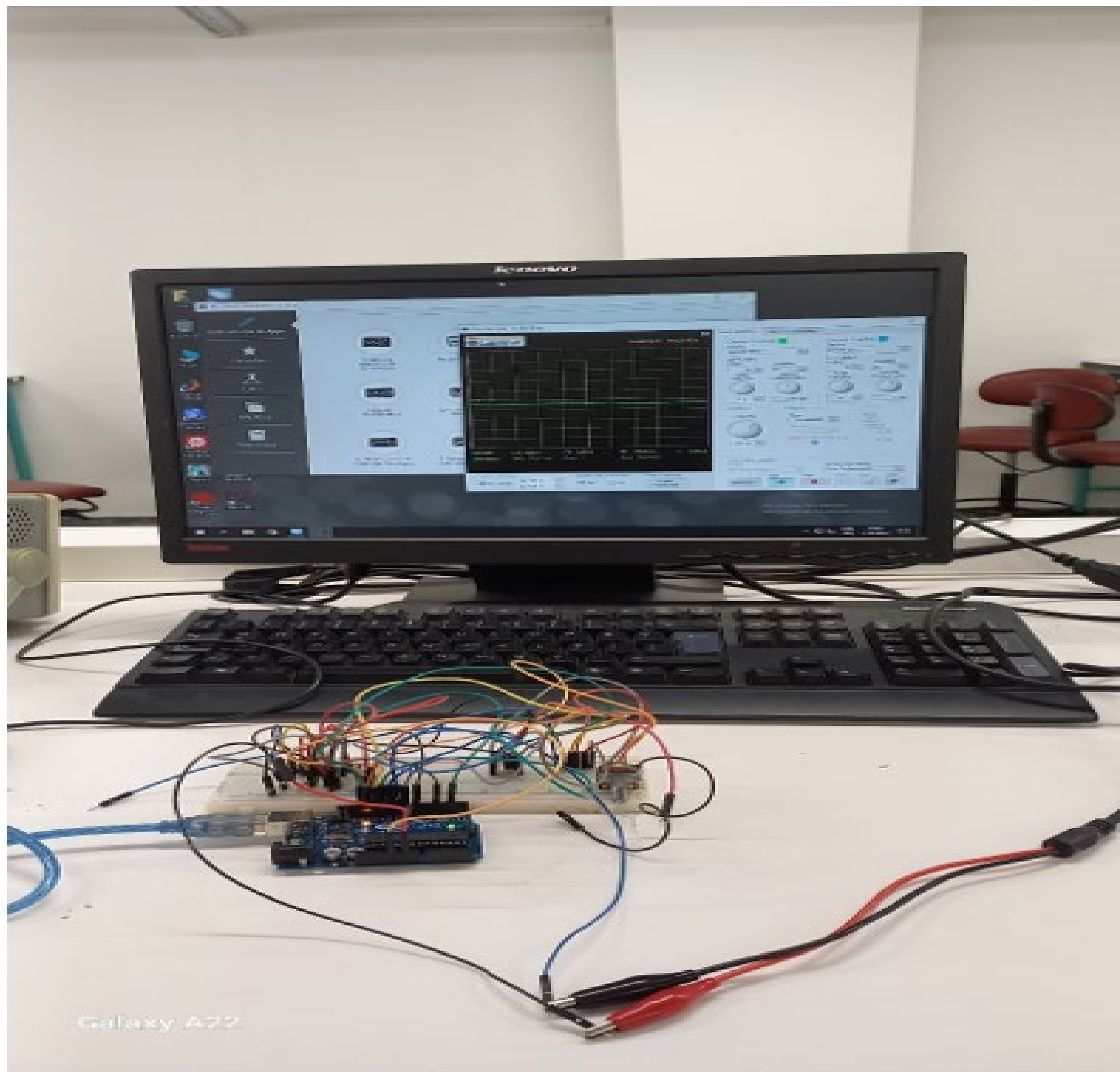
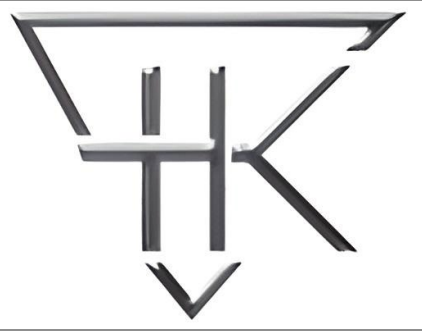


Marketing Plan

	1.Year	2. Year	3. Year	4. Year
Estimated Number of Customers	5	10	15	20
Estimated Product Quantity	5	12	16	22
Estimated Average Product Price (\$)	200.000	200.000	250.000	270.000
Estimated Turnover(\$)	725.000	1.500.000	2.960.000	4.730.000

- The estimated product cost is 1,800,000.
- The estimated turnover for the 1st and 4th years is only valid for device sales and does not include commission amounts for each measurement for the device to be developed, as stated in the income model.
- Real and accurate turnover information is included in the financial analysis section.





info@hyperionadvancedtech.com



<https://www.hyperionadvancedtech.com/>



+534 380 06 20

LOGO