



**CERRAHİ  
ARAŞTIRMA  
KONGRESİ**

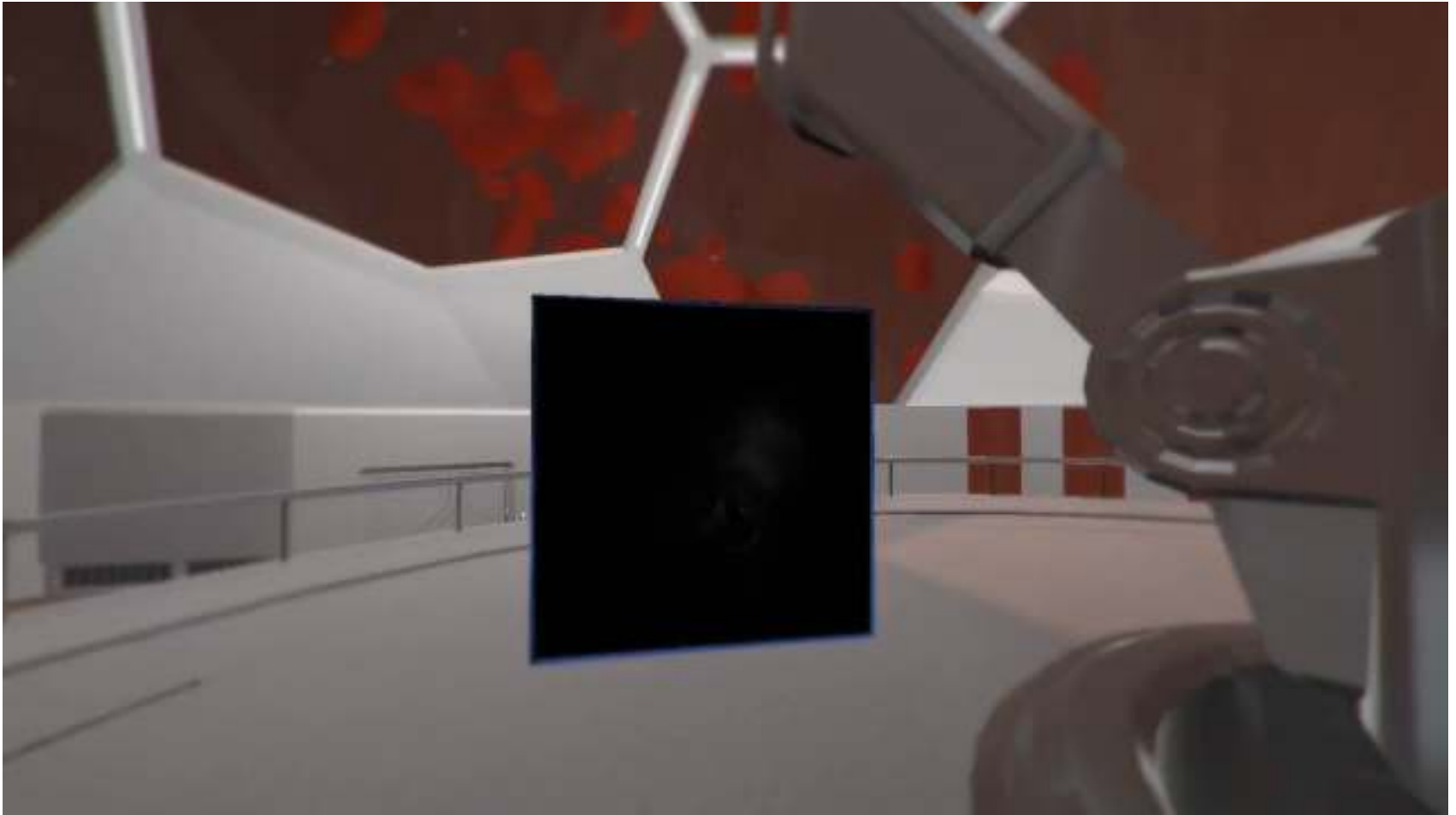
10 - 12 HAZİRAN 2017 / HOCALİ

# ***Cerrahide Yeni Teknolojilerin Gelişimi ve Değişimi***



*Dr. Güldeniz Karadeniz Çakmak  
Bülent Ecevit Üniversitesi Tıp Fakültesi  
Genel Cerrahi A.D.*

# Virtual Reality



# Augmented Reality



WITH CURRENT TECHNOLOGY

You can only see the skin

# 3D Medikal Görüntüleme



# Holoanatomy - HoloLens

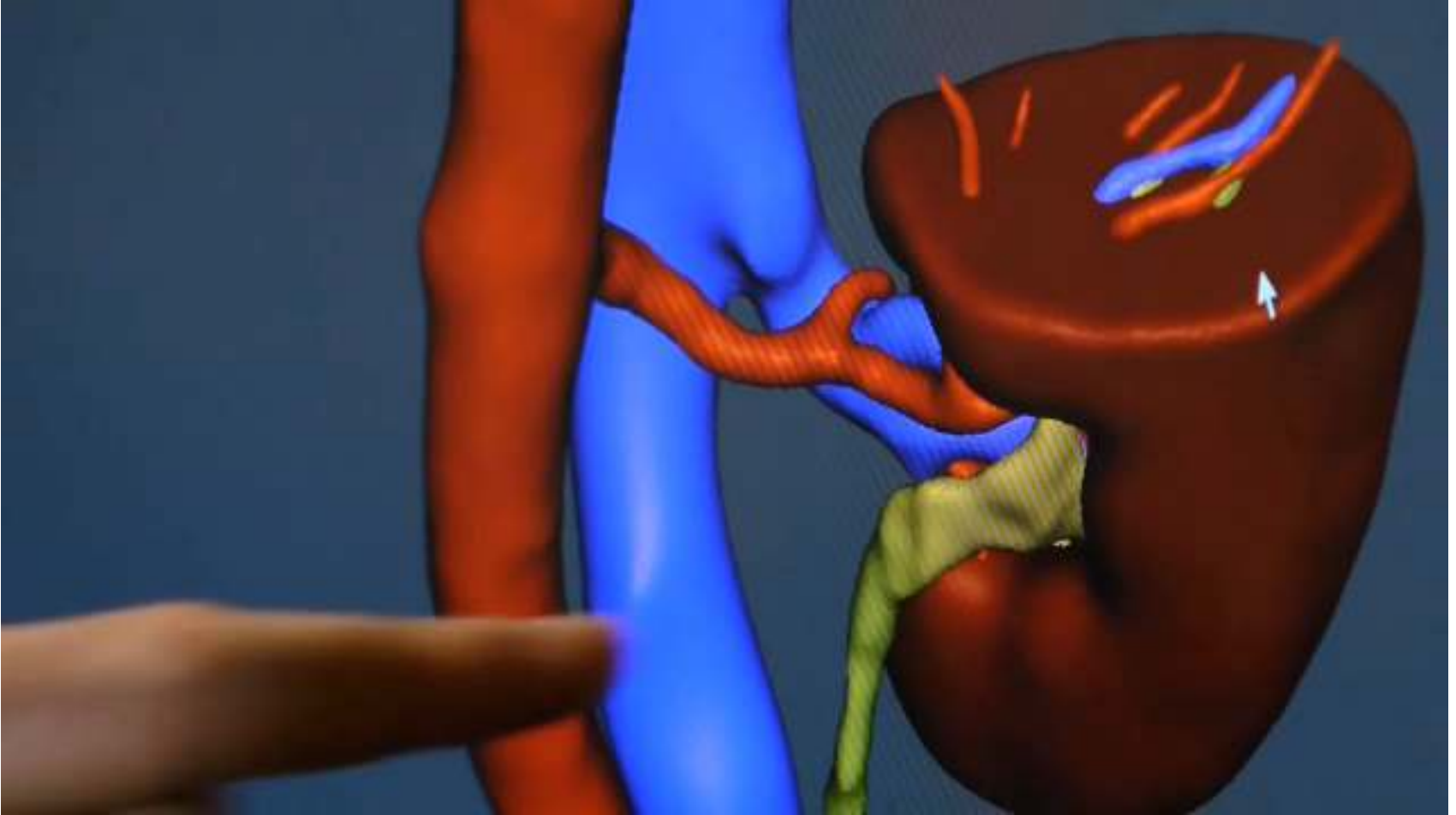


# Canlı Dokudan Diyagnoz (iKnife)

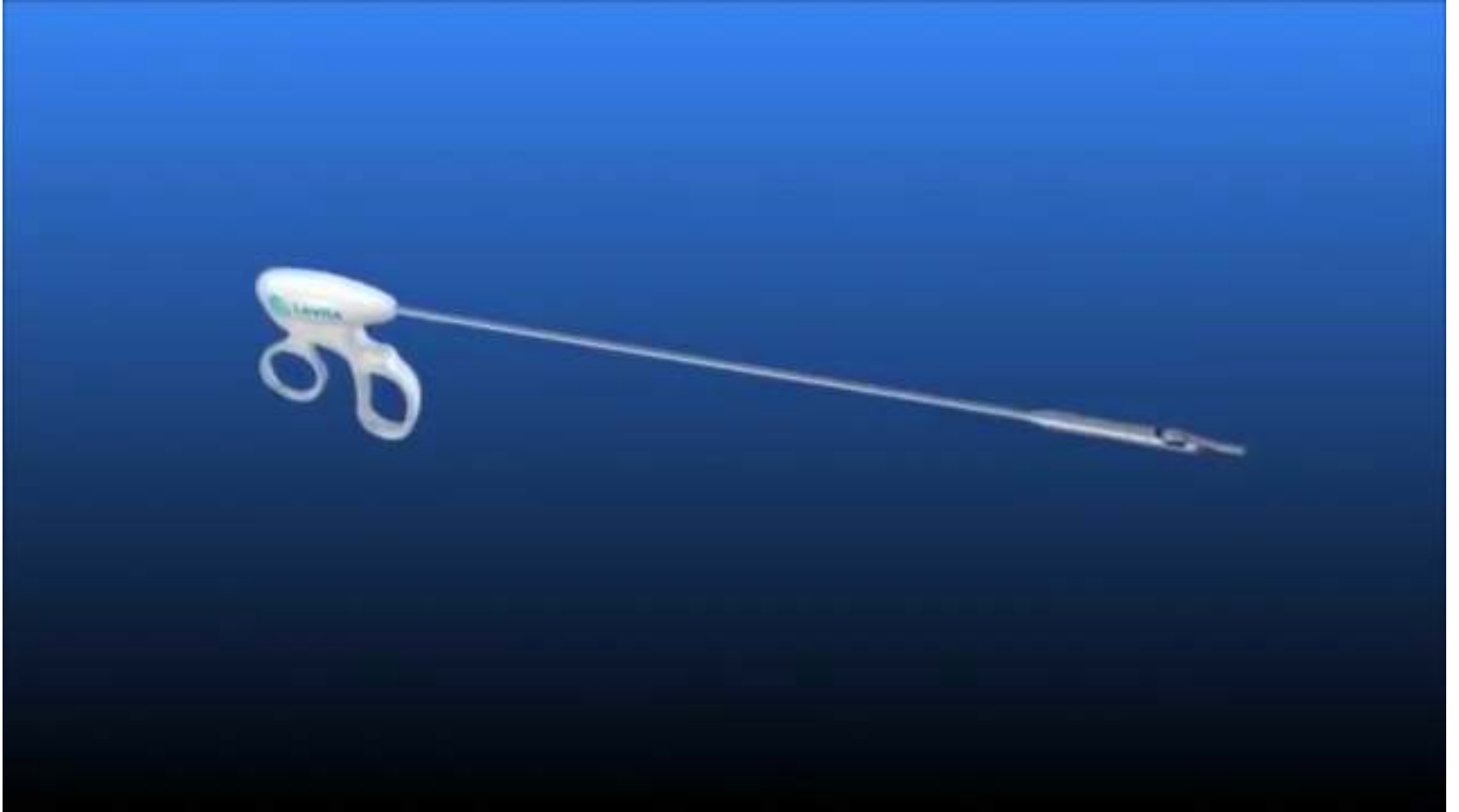


# Preoperatif Planlama ve Eđitim

## 3D Baskı ve Simölasyon



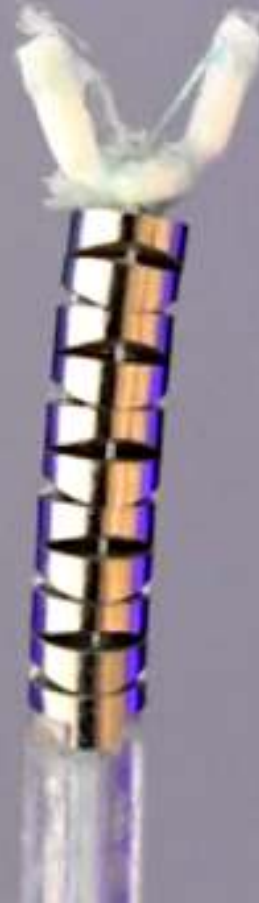
# Minimal İnvaziv Cerrahi





# Cerrahi Robotik AXSiS

This wormy arm thing



Futurism



# PILL ROBOTS

The Future of Non-Invasive Surgery

# Yapay Zeka



## AI For Surgery

**IBM WATSON**

 *Macro Data Storage*

 *Natural Language Queries*

**Machine Learning Algorithms**

 *Recognizing Symptoms*

 *Smart Assistant*

## SOURCE INFORMATION

From the Department of Emergency Medicine, Harvard Medical School and Brigham and Women's Hospital, and the Department of Health Care Policy, Harvard Medical School, Boston (Z.O.); and the Department of Medical Ethics and Health Policy, Perelman School of Medicine, and the Department of Health Care Management, Wharton School, University of Pennsylvania, Philadelphia (E.J.E.).

---

**Access this article:** [Subscribe to NEJM](#) | [Purchase this article](#)

**CONTENT:** [Home](#) | [Current Issue](#) | [Articles](#) | [Issue Index](#) | [Specialties & Topics](#) | [Multimedia & Images](#) | [Archive 1812-](#)

**INFORMATION FOR:** [Authors](#) | [Reviewers](#) | [Subscribers](#) | [Institutions](#) | [Media](#) | [Advertisers](#) | [Agents](#)

**SERVICES:** [Subscribe](#) | [Renew](#) | [Pay Bill](#) | [Activate Subscription](#) | [Create or Manage Account](#) | [Alerts](#) | [RSS & Podcas](#)

**RESOURCES:** [Physician Jobs](#) | [Reprints](#) | [Conventions](#) | [NEJM Knowledge+](#) | [NEJM Journal Watch](#) | [NEJM Catalyst](#)

**NEJM:** [About](#) | [Product Information](#) | [Editors & Publishers](#) | [200th Anniversary](#) | [Terms of Use](#) | [Privacy Policy](#) | [Copyri](#)

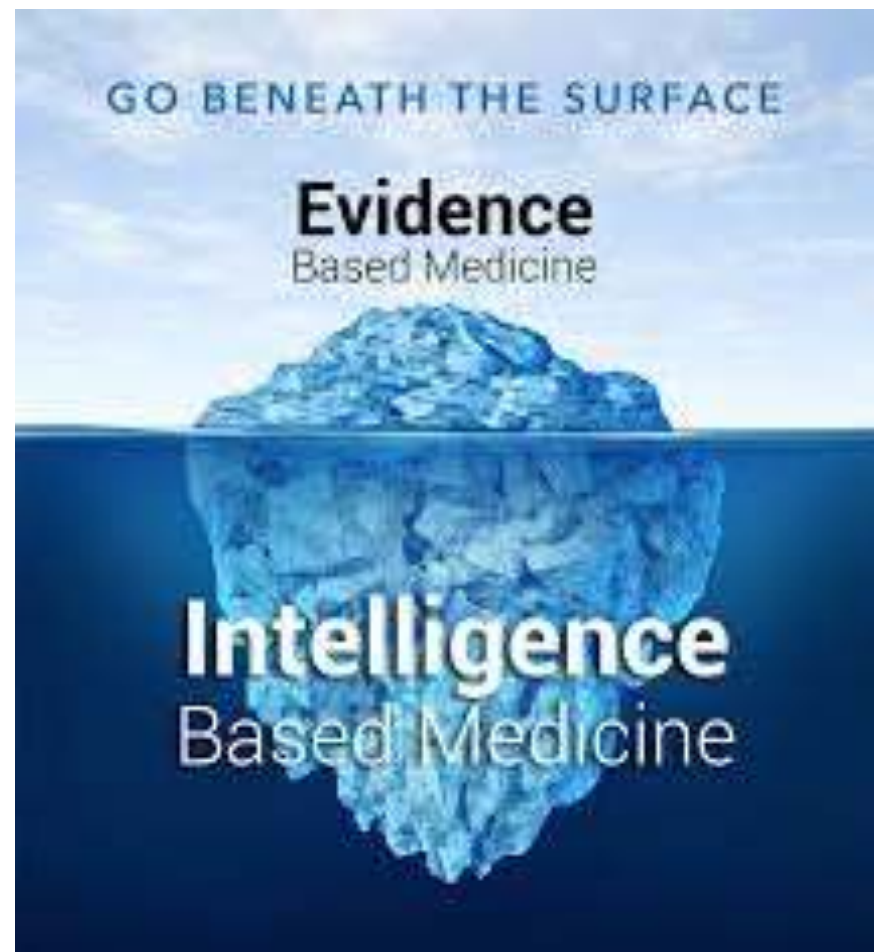
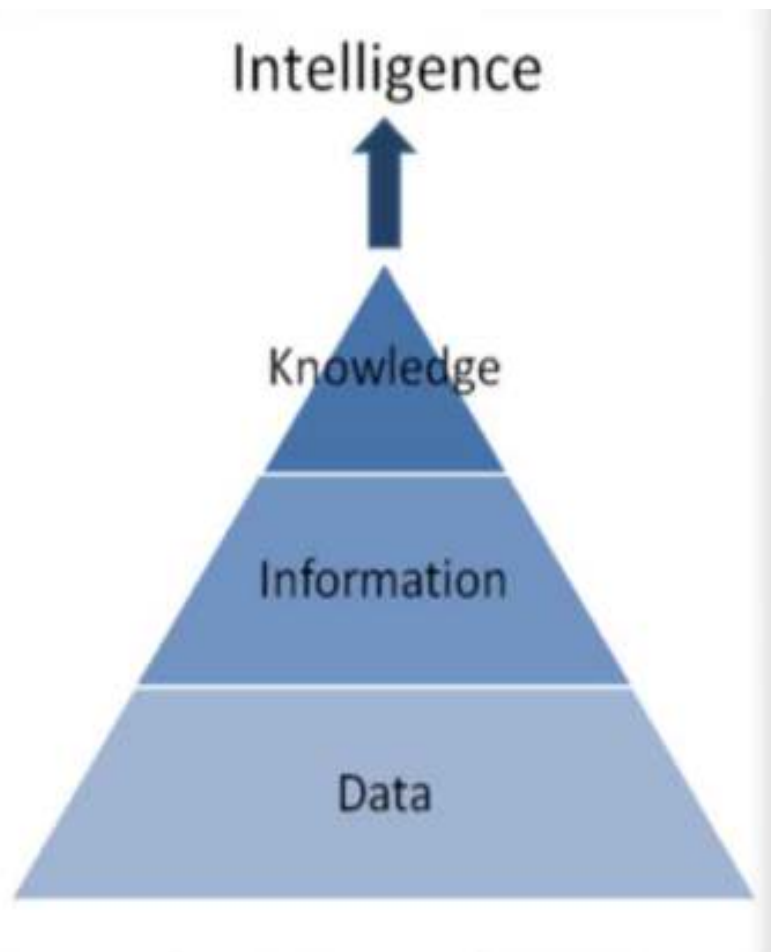
**CME:** [Weekly CME Program](#) | [Browse Weekly Exams](#) | [Your CME Activity](#) | [Purchase Exams](#) | [Review CME Program](#)

Follow us



<http://www.nejm.org/doi/full/10.1056/NEJMp1606181>

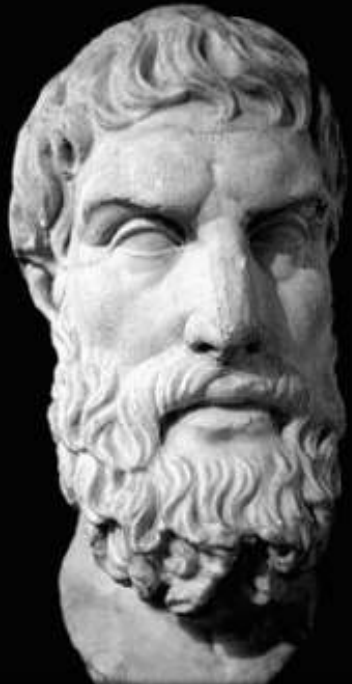
# ARTIFICIAL INTELLIGENCE/ THE PRESENT





**Technology is  
a tool, not our  
goal**

---



Nothing is enough for the man to whom enough is  
too little.

(Epicurus)



# Steve Jobs

1955-2011

"The ones who are crazy enough to think  
that they can change the world,  
are the ones who do."



**Do what you can't**





Teşekkürler