

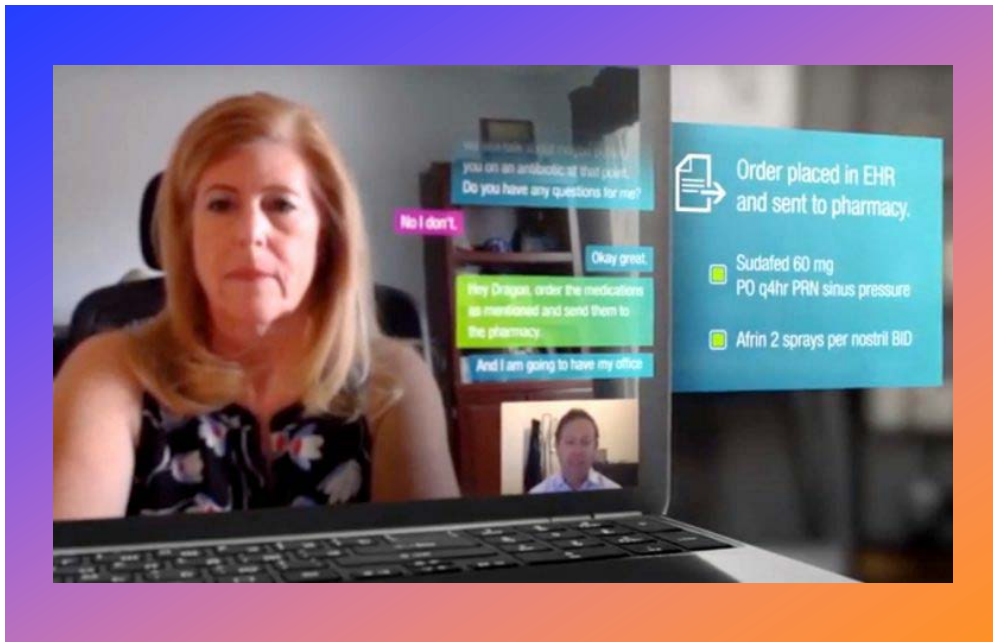
AI IN TELEHEALTH

The background features a gradient from purple on the left to orange on the right. It is decorated with numerous circular splatters and dots in various shades of purple and blue. A faint, stylized globe is visible in the center, partially obscured by the splatters. In the top right corner, there are three small white icons: a plus sign, an open circle, and a solid circle.

Elizabeth A. Krupinski, PhD FSIIIM, FSPIE, FATA, FAIMBE

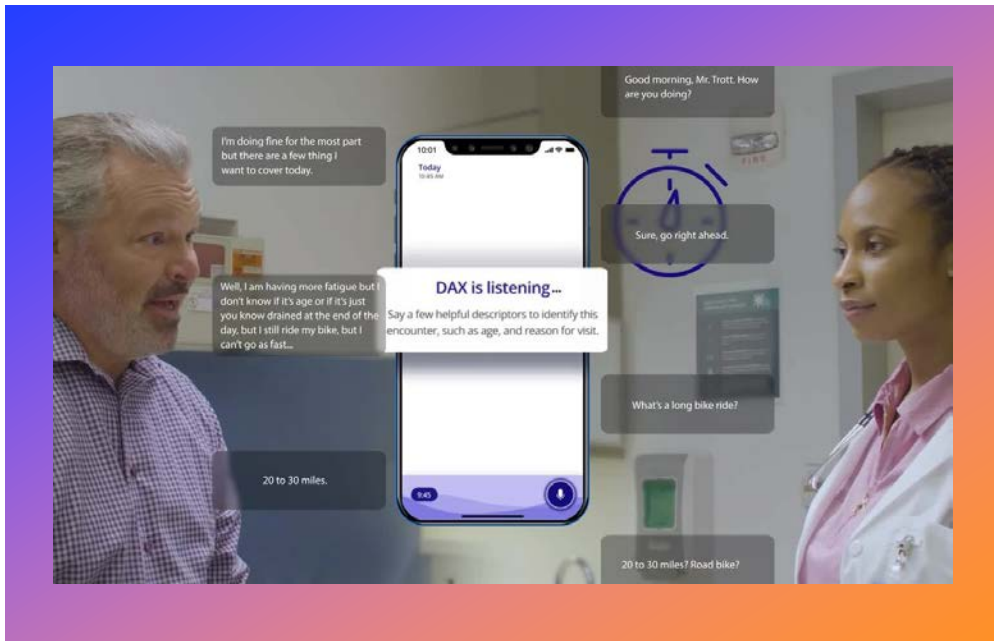
Arizona Telemedicine Program

Southwest Telehealth Resource Center



Ambient Clinical Intelligence

- **Advanced, voice-enabled AI: automatically document patient encounters & free-flowing conversation between physician, patients & families**
- **Give patient full attention & ACI creates complete, accurate clinical notes directly in EHR to review & sign**
- **Additional tech can analyze, predict, place orders etc.**
- **Reduce provider burnout, reduce errors**





Embodied AI

- **Robots, virtual assistants, other intelligent systems**
- **Sensors import data from surroundings that AI systems analyze & learn from interactively until goal reached**
- **Develops abstract representation & understanding spatial &/or temporal dimensions world to solve complex tasks**

AI EMR

Predictive analyses

Data visualization

NLP

Security & privacy

Pre-existing condition mapping

Prognosis & diagnosis

Data fetching from wearables

Data normalization (interoperability)

Patient matching (wrong patient)

Automatic reminders (no shows, FU)

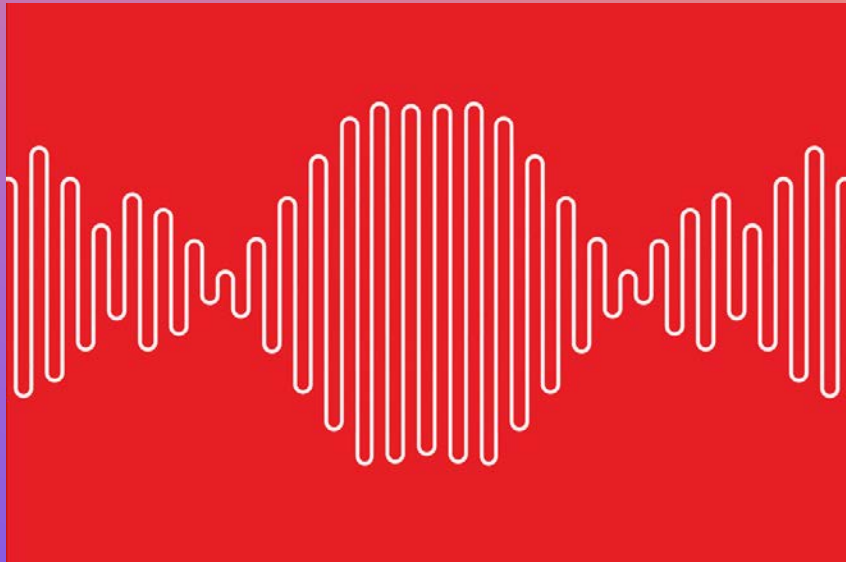
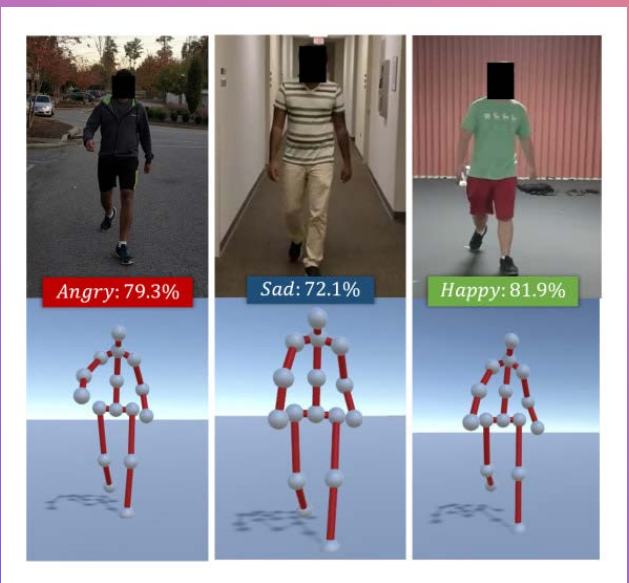
HIE

Billing accuracy

Triaging IP vs TM

AI & Wearables

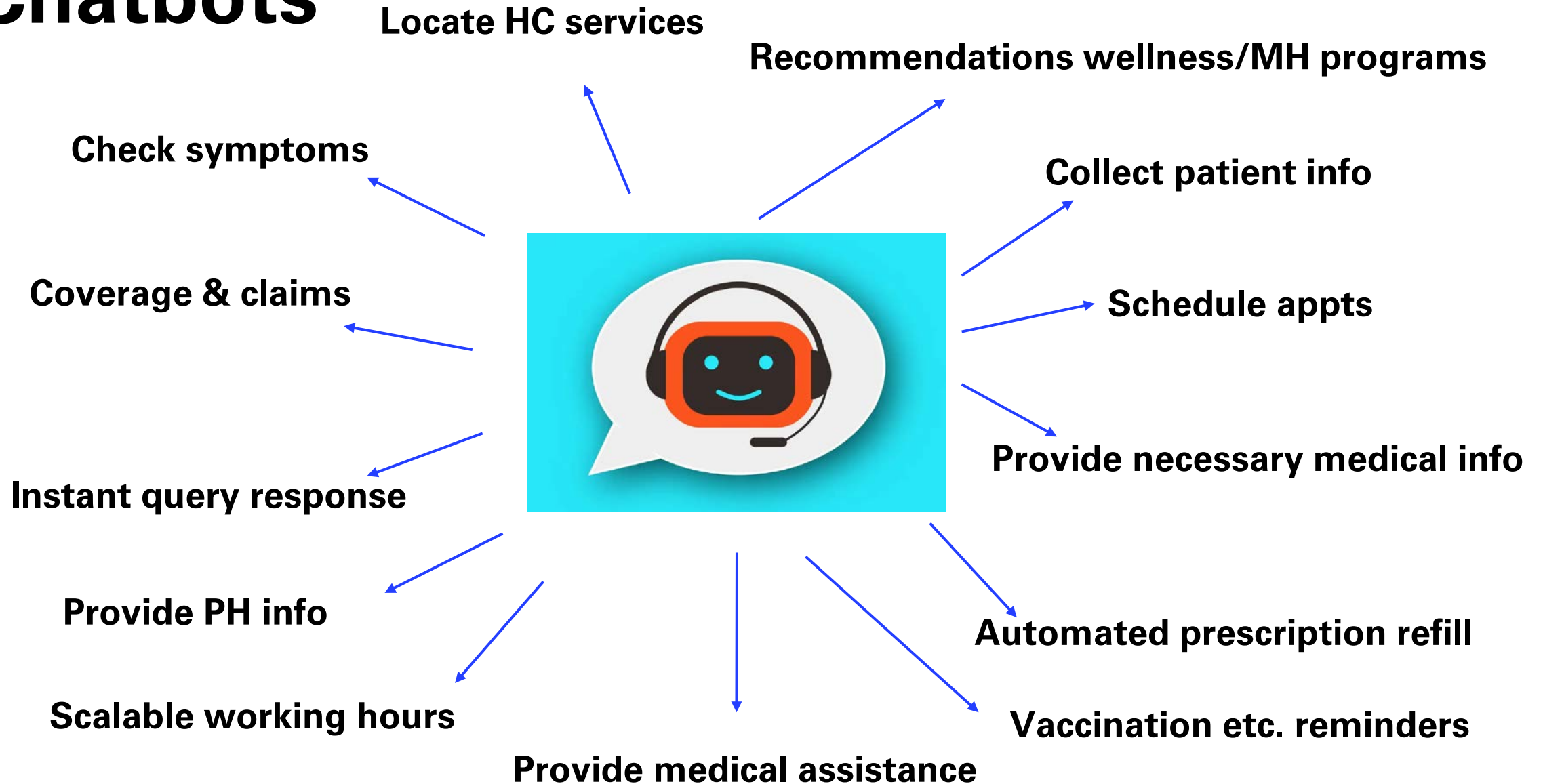




BIOMARKERS



Chatbots



79% of Americans

prefer managing healthcare experiences with technology



Hemoglobin*



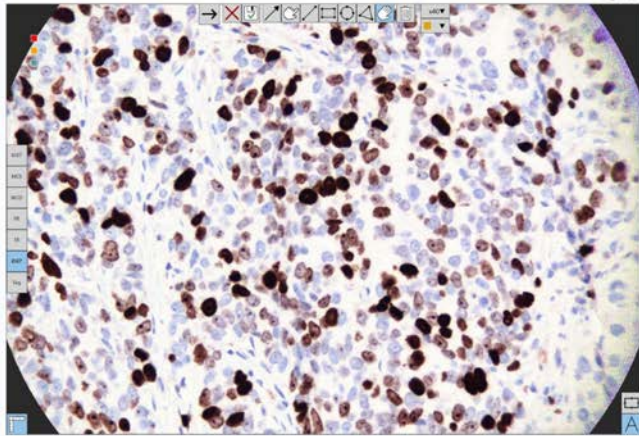
Hemoglobin
A1c*



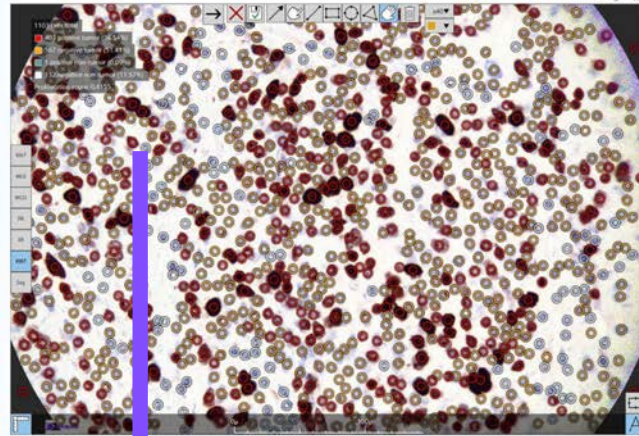
Cholesterol
Total*

and clinically validated AI has supported the
of over two million people.

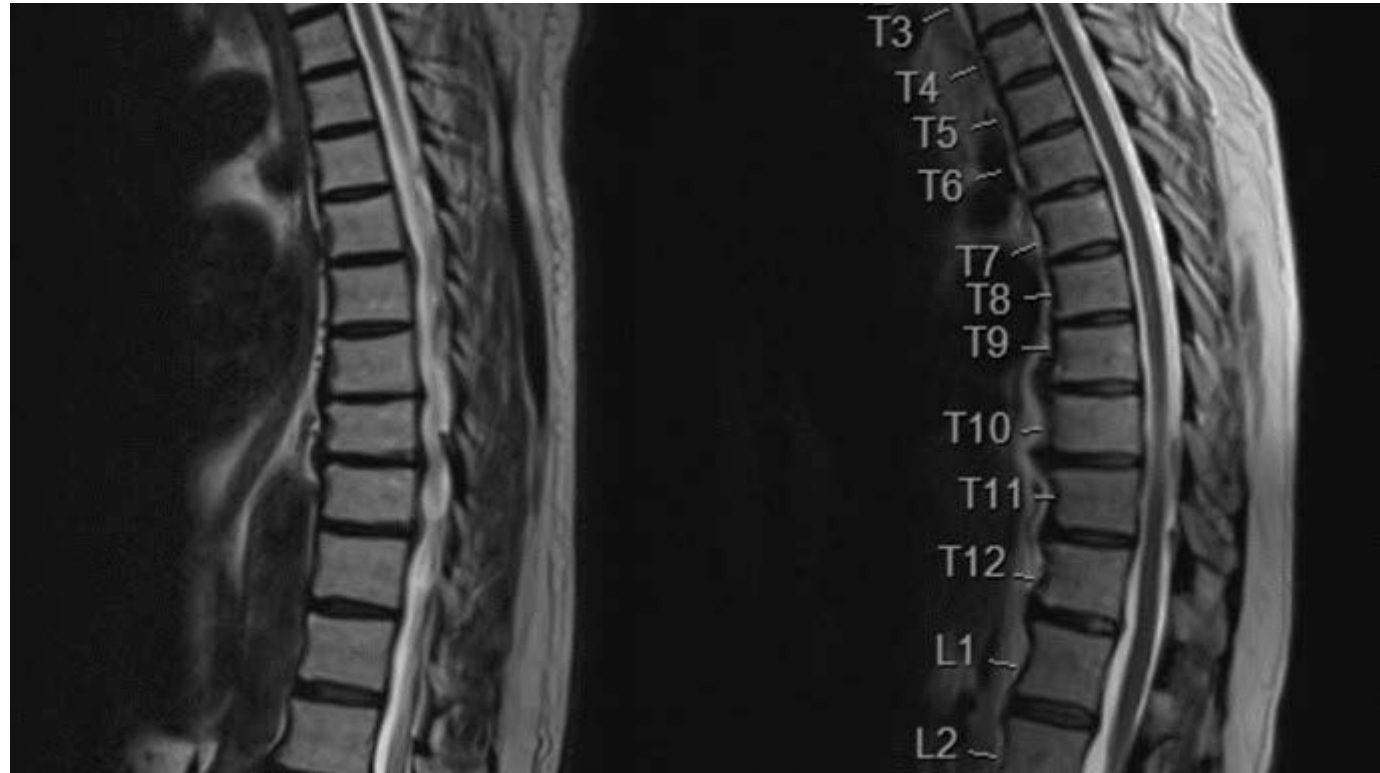
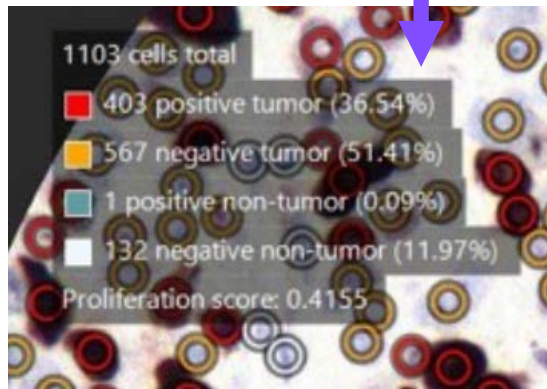




Ki-67 image

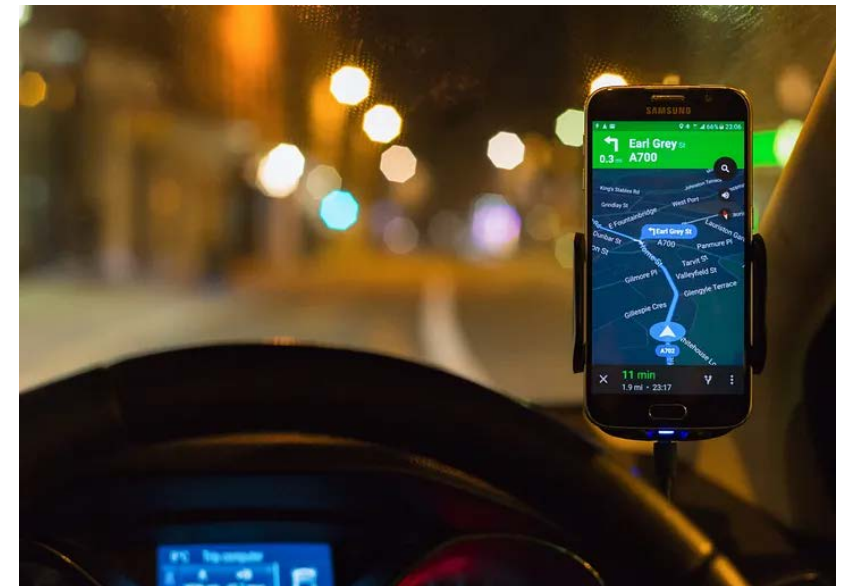


Mindpeak AI algorithms



Challenges

- **Where to apply effectively**
 - Lack internal expertise
 - Lack understanding compliance & regulatory
 - User trust
- **Hallucinations**
- **ROI & \$\$ for implementation/infrastructure**
- **Ethical (fairness, bias) & legal (privacy, security, data & IP/ownership)**
- **Lack quality data**
- **Clinically irrelevant performance metrics**
- **Methodological research flaws**
- **Transparency & explainability**
- **Skill gaps**
- **Deskilling**





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