Manažment STEMI na Slovensku.

Silné a slabé miesta, ako ďalej.

Martin Studenčan

KARDIOCENTRUM
FNsP J.A.Reimana
PREŠOV

SLOVAKS 2

SLOVENSKÝ REGISTER AKÚTNYCH KORONÁRNYCH SYNDRÓMOV

Vedecká rada registra SLOVAKS

SLOVENSKÁ KARDIOLOGICKÁ SPOLOČNOSŤ
SLOVAK SOCIETY OF CARDIOLOGY

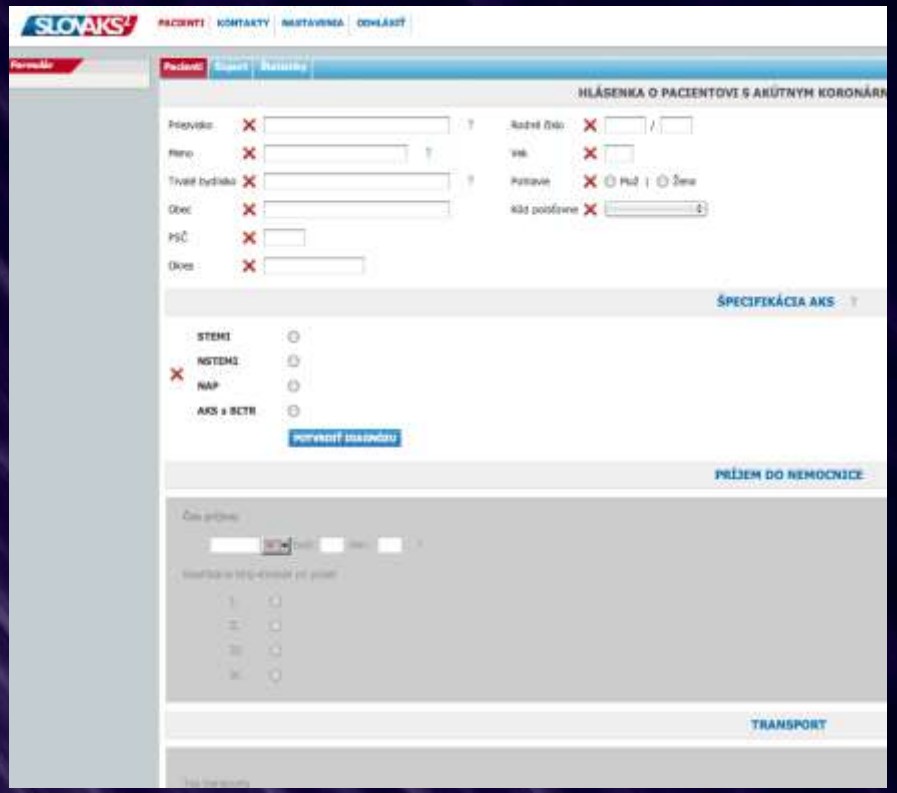
Doc. MUDr.M.Studenčan,PhD., predseda
Prof. MUDr.V.Hricák, CSc.
MUDr. F.Kovář, PhD.
MUDr. P.Kurray

prezident SKS: MUDr. P. Hlivák, PhD..
Hl.odbor. MZ SR: Prof.R.Hatala, PhD.

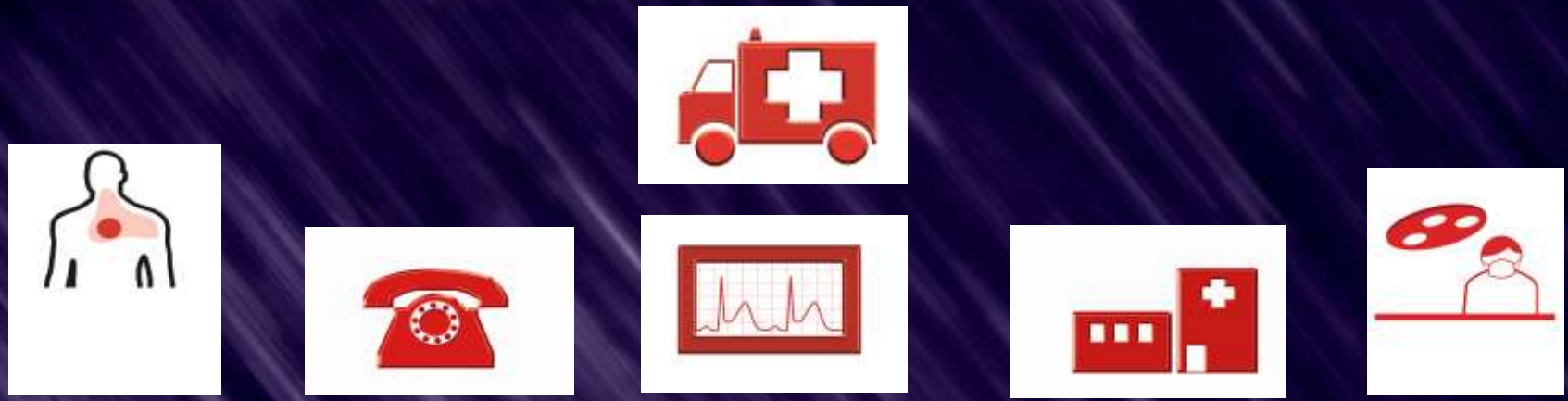
- Register organizuje SKS od r. 2007
- Od r. 2011 na báze 2-mesačných snapshotov
- Opakovanie každé 3-4 roky
- Pokrýva PKI aj nonPKI pracoviská
- Zahŕňa až 90% zo všetkých pracovísk

www.slovaks2.sk

Elektronická hlásenka



STEMI



Celkový ischemický čas

Manažment STEMI

EU

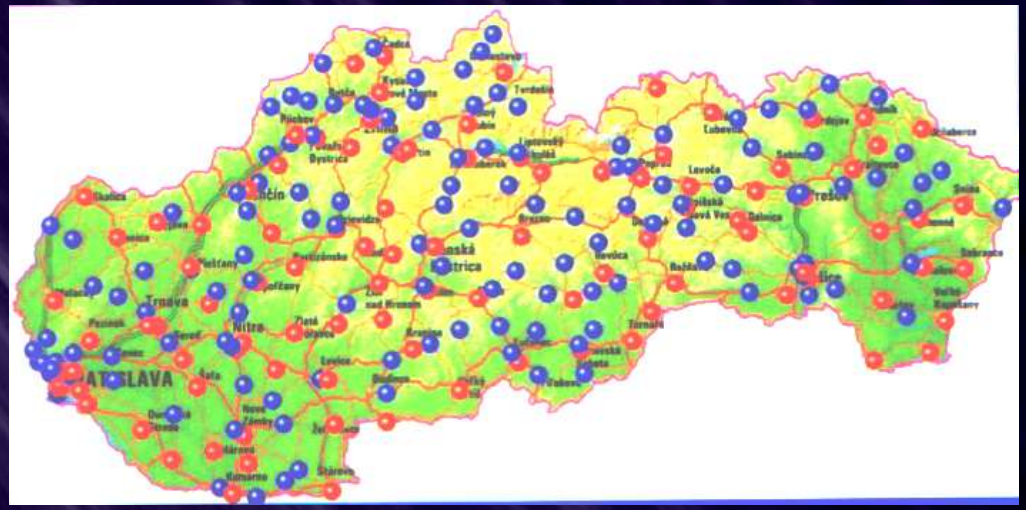
USA

Zdravotný záchranný systém SR

2001

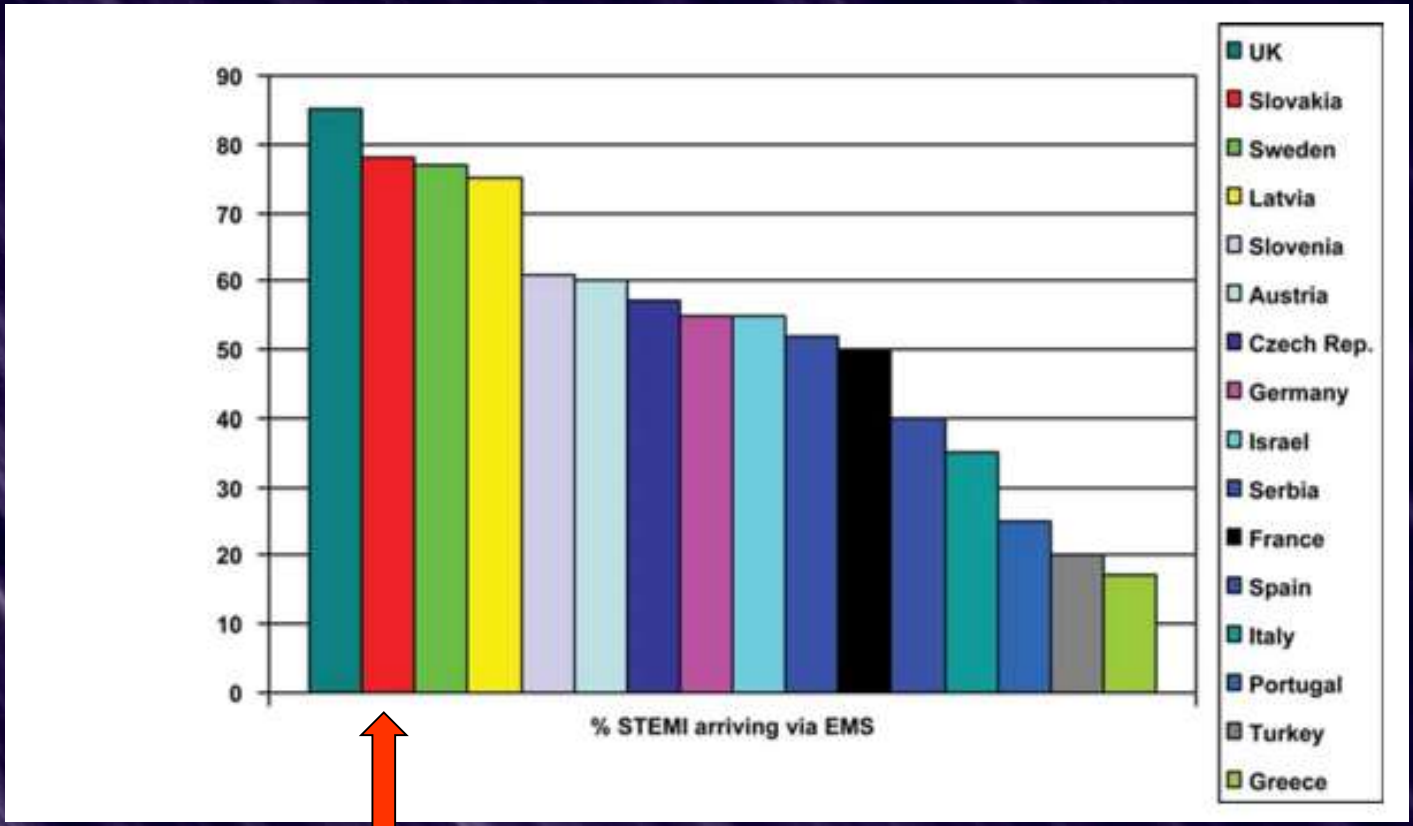
91 staníc ZZS

2006



264 staníc ZZS

EMS transportation in STEMI



Slovakia

Widimsky P et al., Eur H Journal, 2009

Transporty STEMI ku pPKI s pomocou ZZS

EU 27	25 – 85%
Slovensko 2015	82%

Kardiocentrá SR

1997

2018

SLOVAKS2

2015

PKI centrum

príjem

PPKI

median: 28min

SLOVAKS2

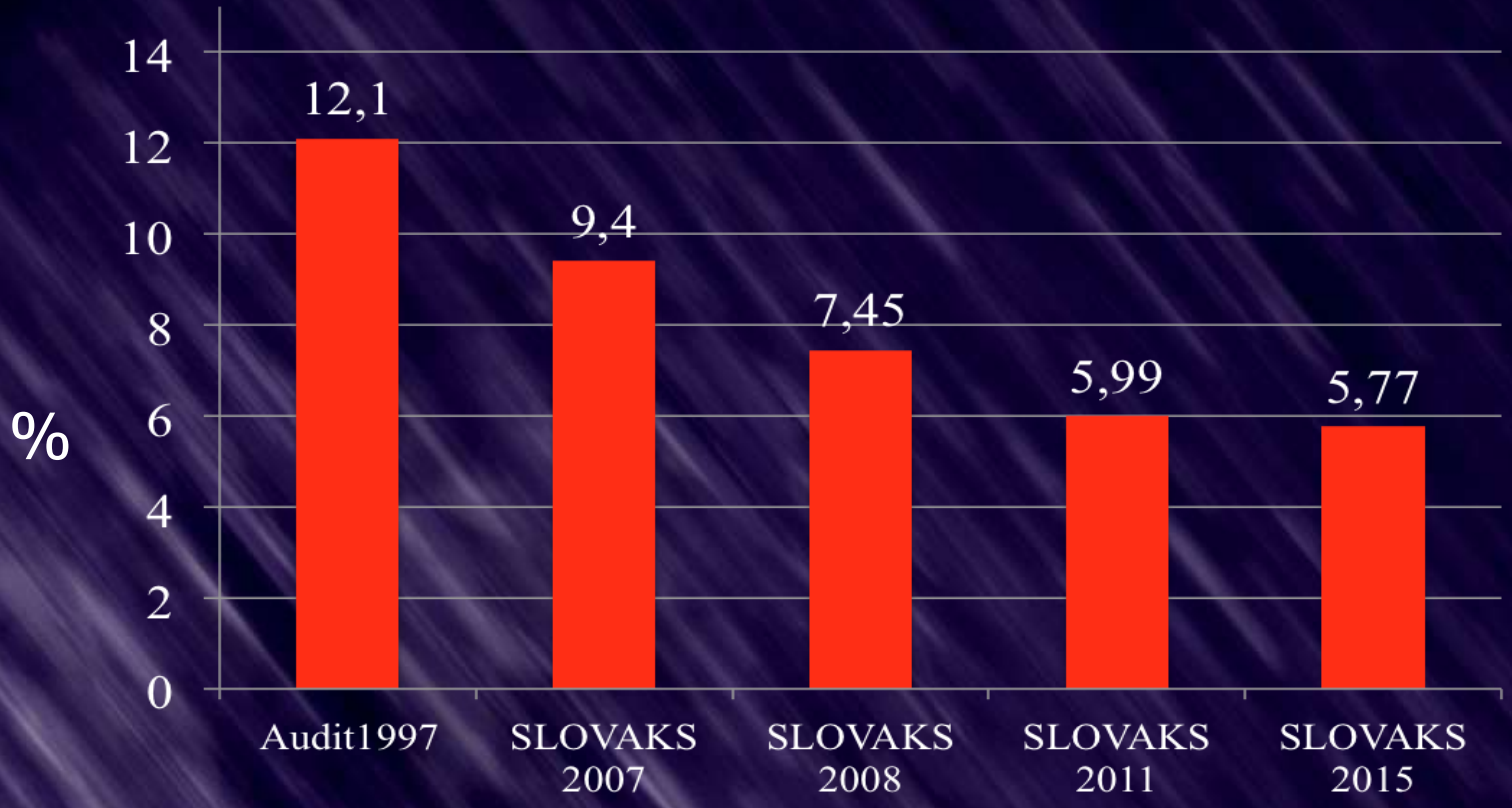
2015

Podiel pacientov so STEMI liečených primárnou PKI

SLOVAKS 2

2015

Nemocničná mortalita STEMI



3,57%
PPKI

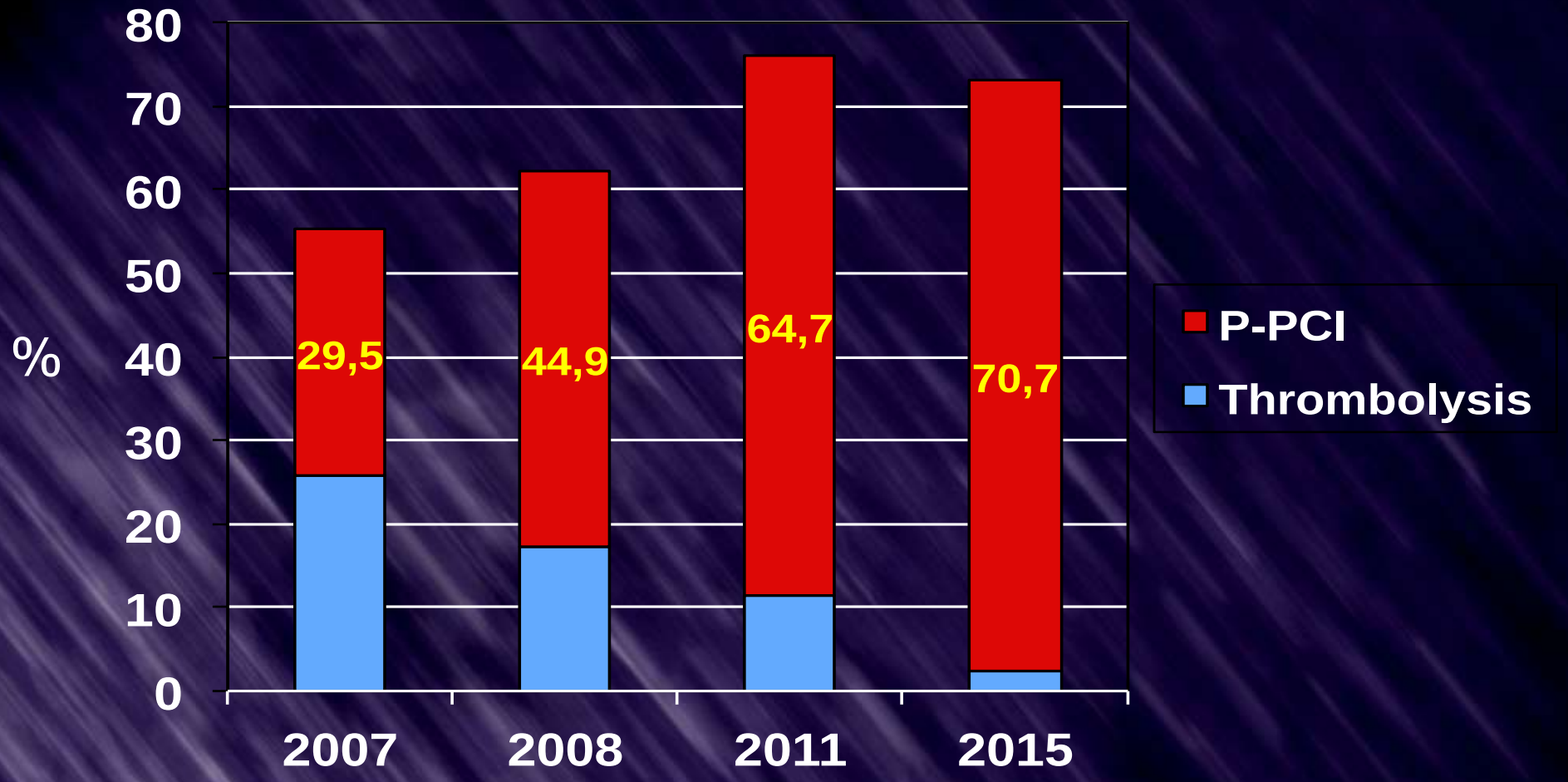
Mortalita STEMI

	SR 2011	EU 2012
Hospital	5,99%	4-6,1%
30 dní	10,7%	4,4-6,1%
1 rok	14,6%	9-11,2%

SLOVAKS2

2015

Primárna reperfúzna liečba u STEMI

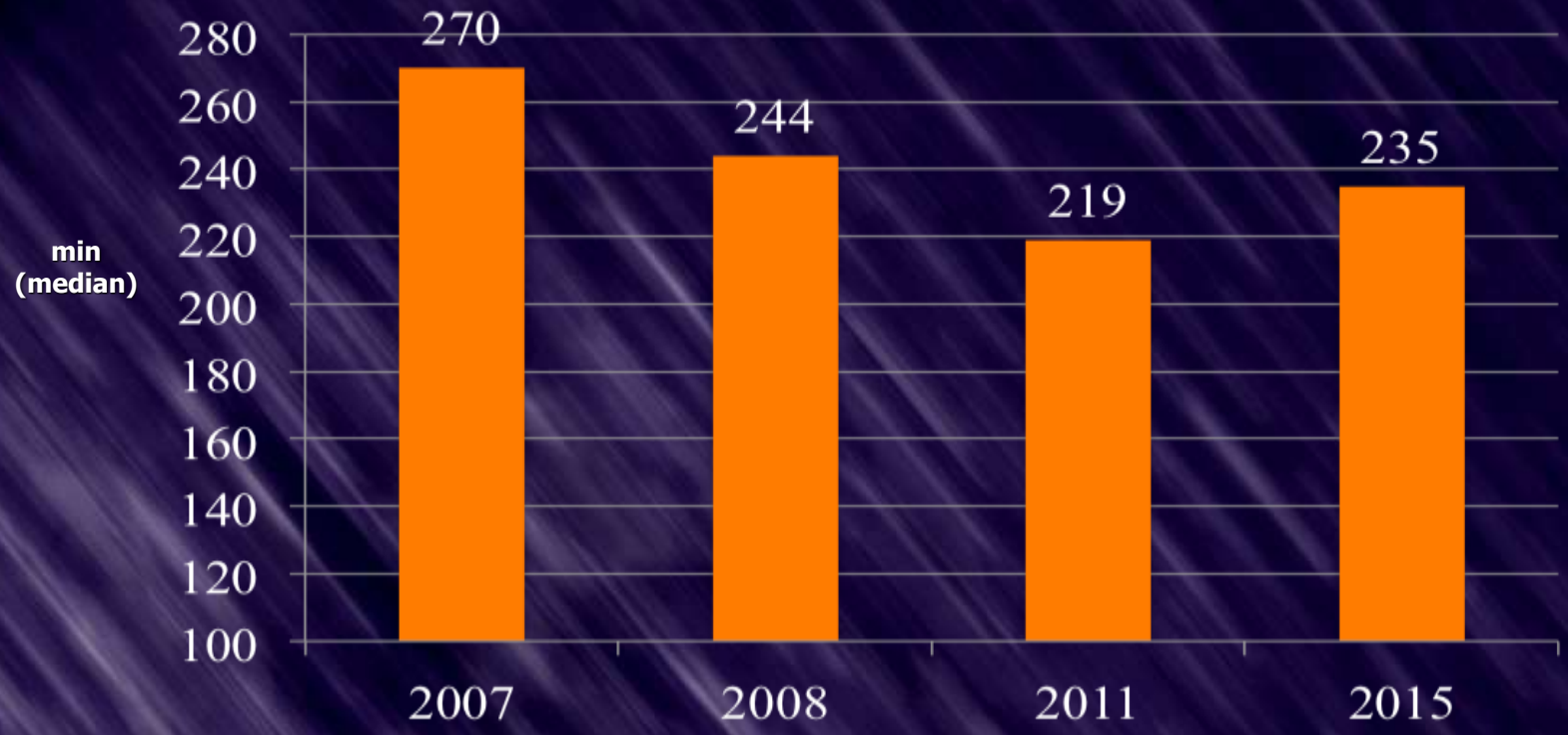


SLOVAKS2

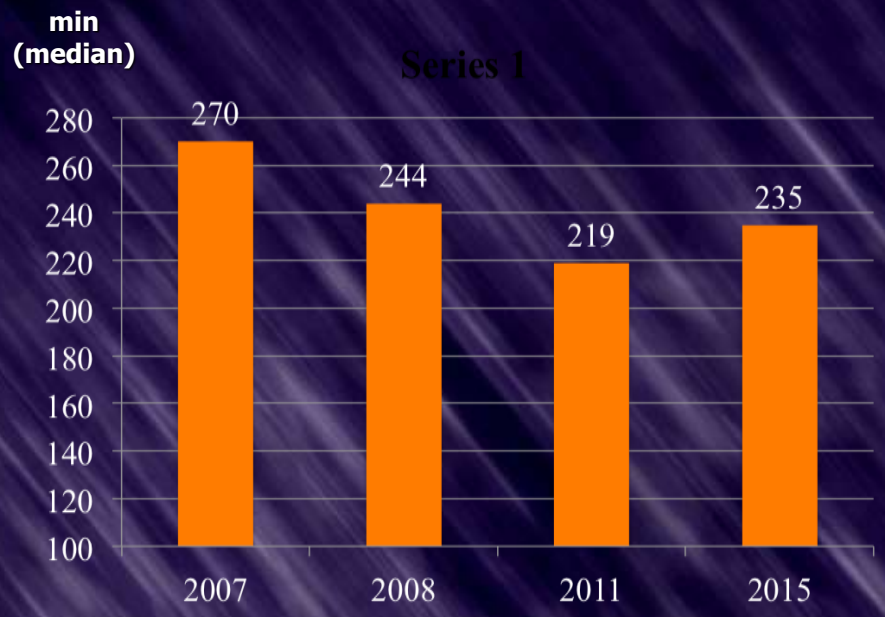
2015

Celkový ischemický čas

(STEMI liečení P-PCI)



Celkový ischemický čas
(STEMI liečení P-PCI)



SK (2015)	235 min
Czech(2010)	217 min
UK (2008)	180 min
SWE (2007)	189 min
Austria(2012)	175 min

Plnenie časových kritérií pre P-PKI
(podľa guidelines ESC)

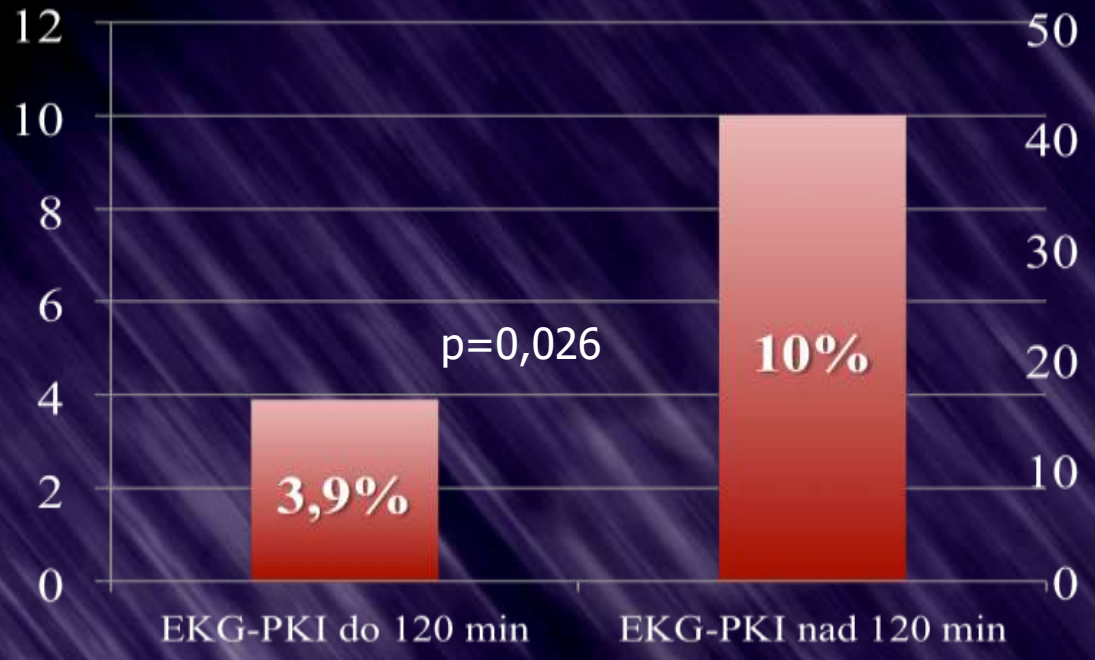
SLOVAKS^2

2015

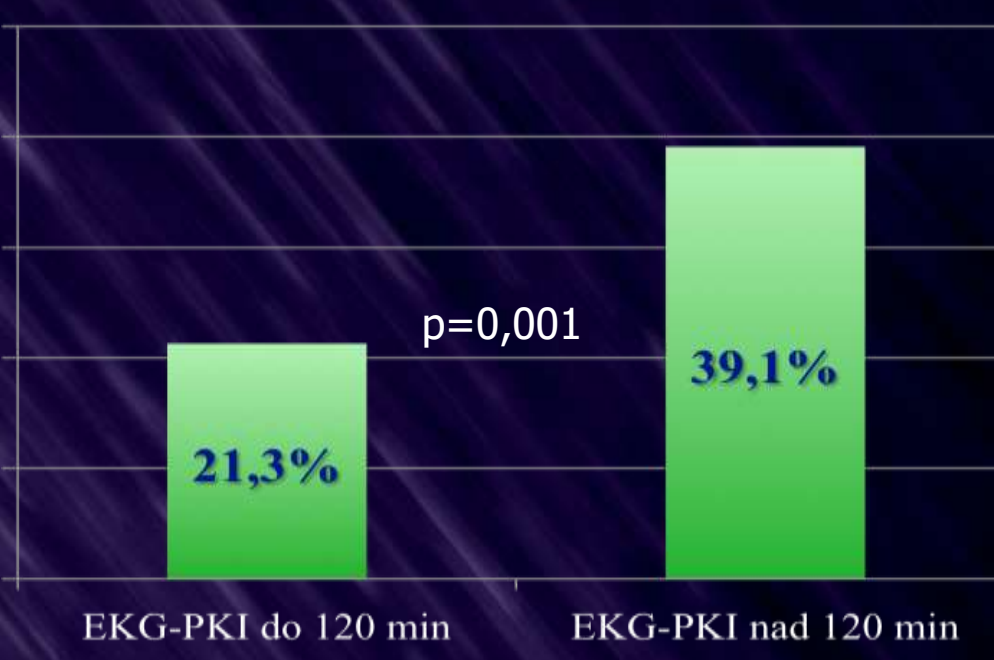
„EKG-PKI" do 120 min	63%
„EKG-PKI" do 90 min	35%

Krátkodobá prognóza podľa intervalu EKG-PKI

Hospitalizačná mortalita



Výskyt kard.dekomp



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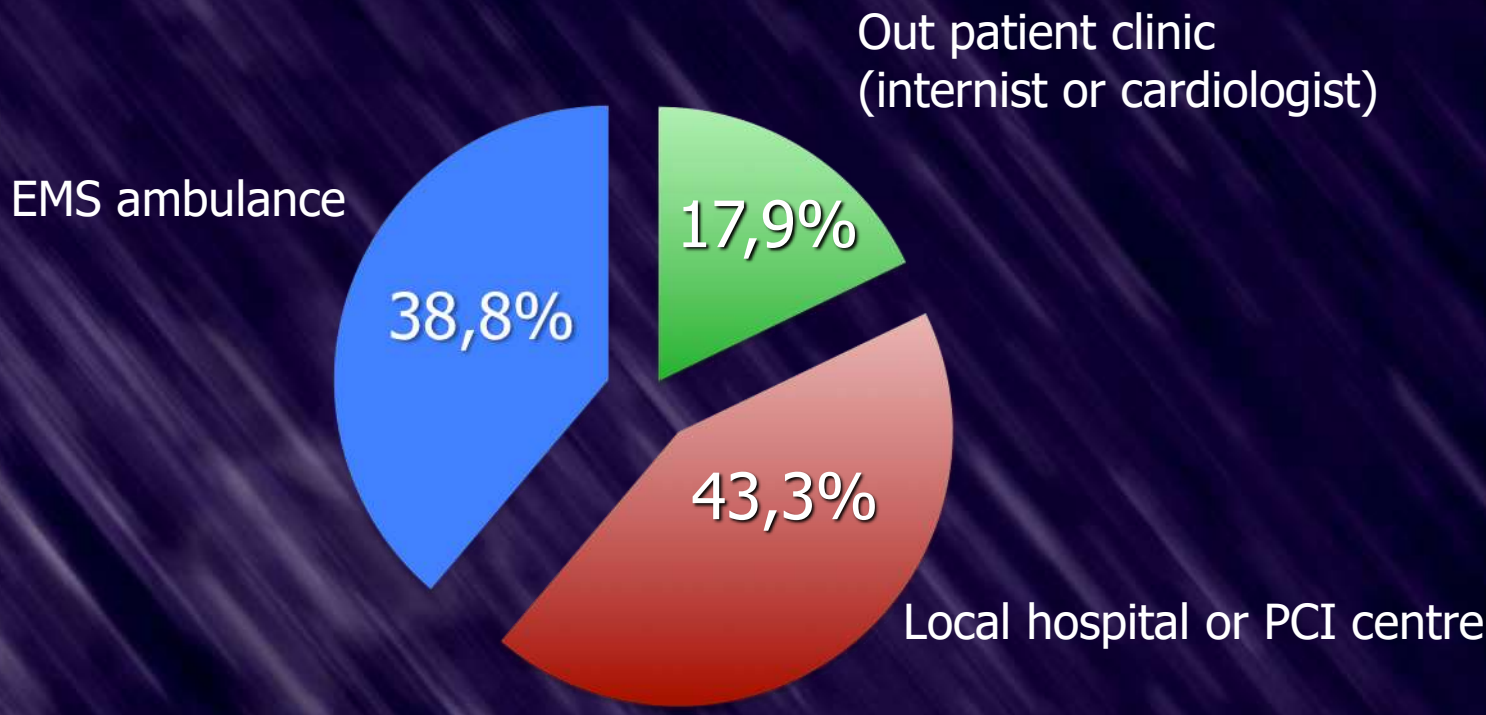
Šaffová, Studenčan et al. Cardiology Letters, 2016 25(5)

SLOVAKS2
2015

Who establish an ECG diagnosis of STEMI



SLOVAKS2
2015

Problém

1. Veľká časť pacientov so STEMI nestihne pPKI v odporúčanom časovom limite.

2. Pacienti, ktorí mali dostať fibrinolýzu ju nedostali.

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Komunikačná technológia

2017

03.05.2019 8:24

Riešenie

STEMI

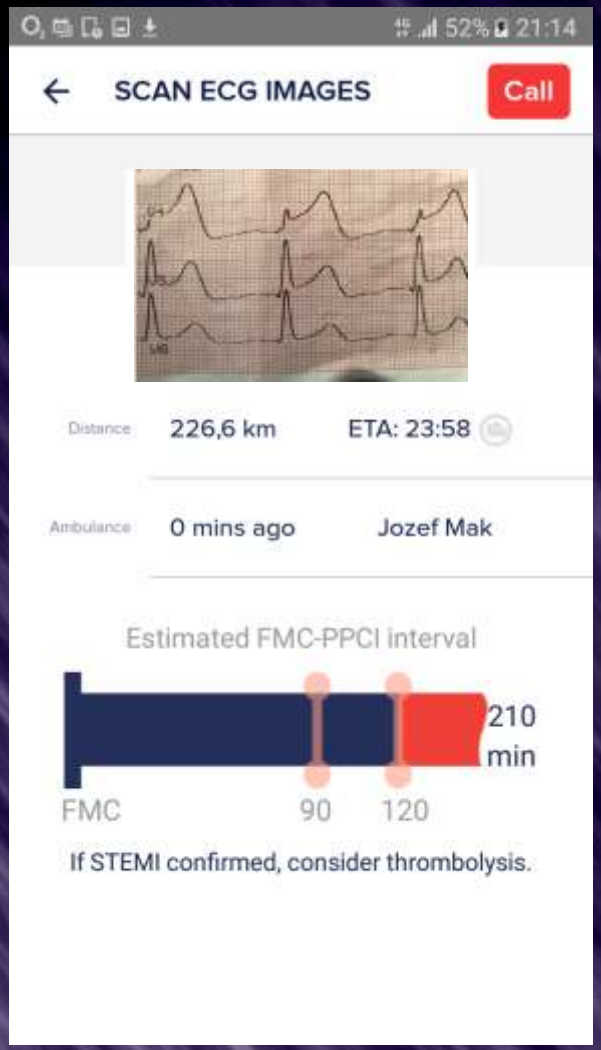
EMS AMBULANCE

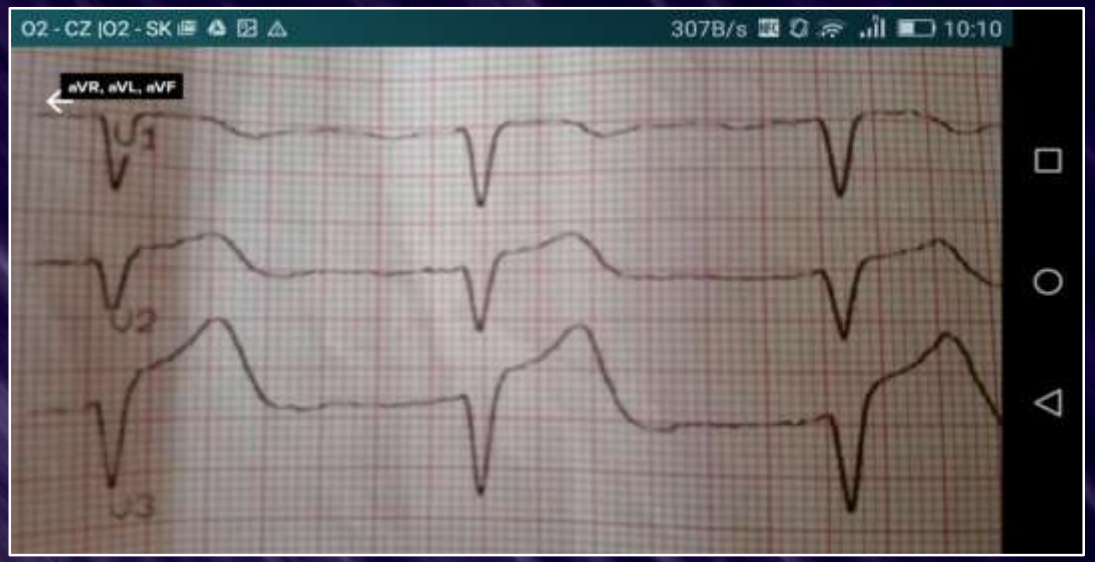
ECG transfer

Voice consultation

CARDIOCENTRE

EKG prenos





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PLOS ONE

RESEARCH ARTICLE

Significant benefits of new communication technology for time delay management in STEMI patients

Martin Studencan[1]*, Daniel Alusik[1], Lukas Plachy[1], Lubica Bajerovska[2], Michal Ilavsky[3], Jozef Karas[3], Adriana Kilianova[3], Juraj Sykora[2], Vladimir Hosa[3], Jan Kmec[1], Miroslav Slanina[1], Daniela Boguska[4]

1 Cardiocenter, Cardiology Clinic of the Teaching Hospital of J.A. Reiman and Prešov University, Faculty of Health Care, Prešov, Slovakia, **2** EMS Košice, Košice, Slovakia, **3** EMS Falck, Košice, Slovakia, **4** Prešov University, Faculty of Health Care, Prešov, Slovakia

* mstudencan@gmail.com

OPEN ACCESS

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Abstract

Background

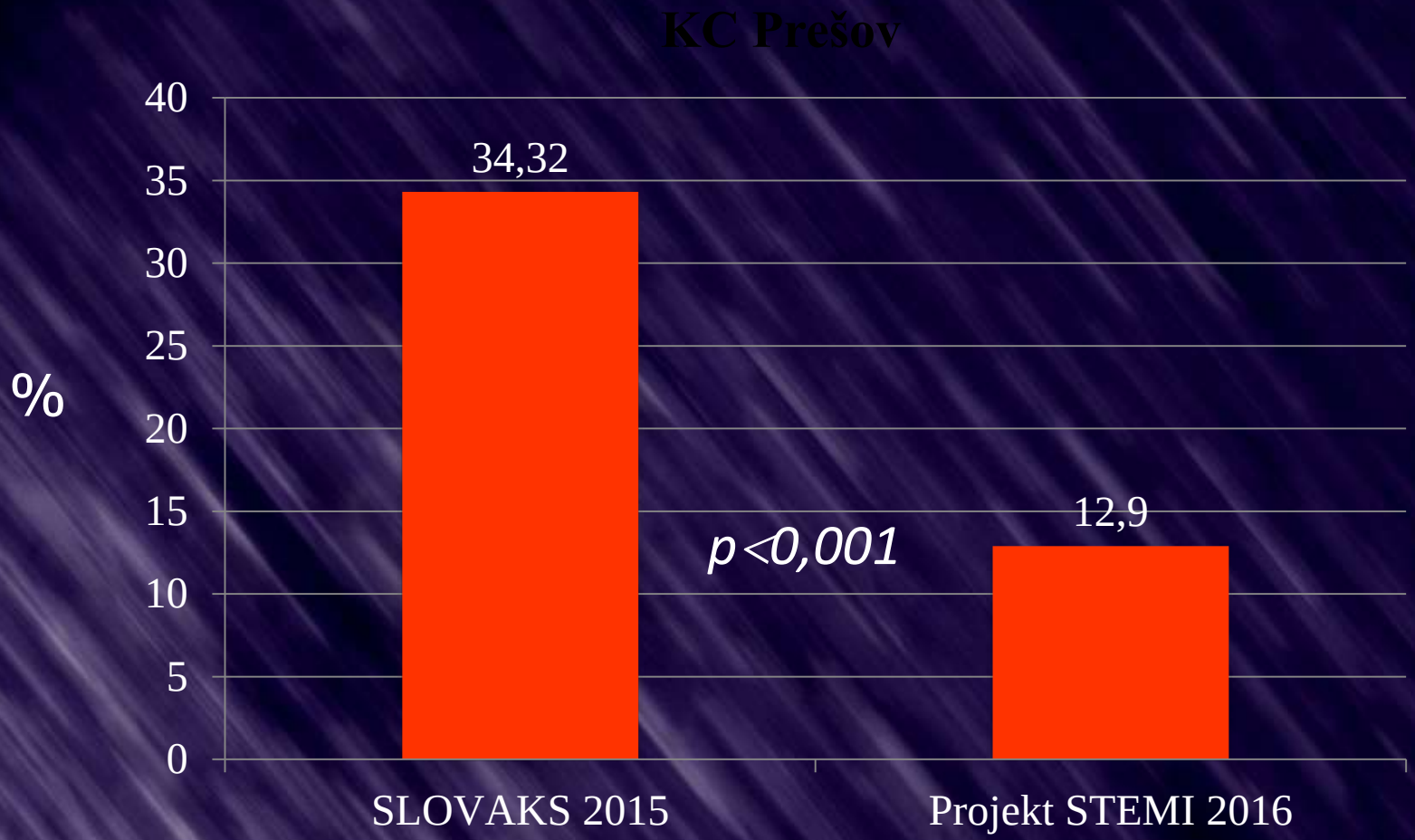
In the acute phase of STEMI, the length of the total ischemic interval is the principal factor affecting both short- and long-term mortality. The length of the interval remains a global problem, and in EU countries these figures vary between 160 and 325 min.

Methods and results

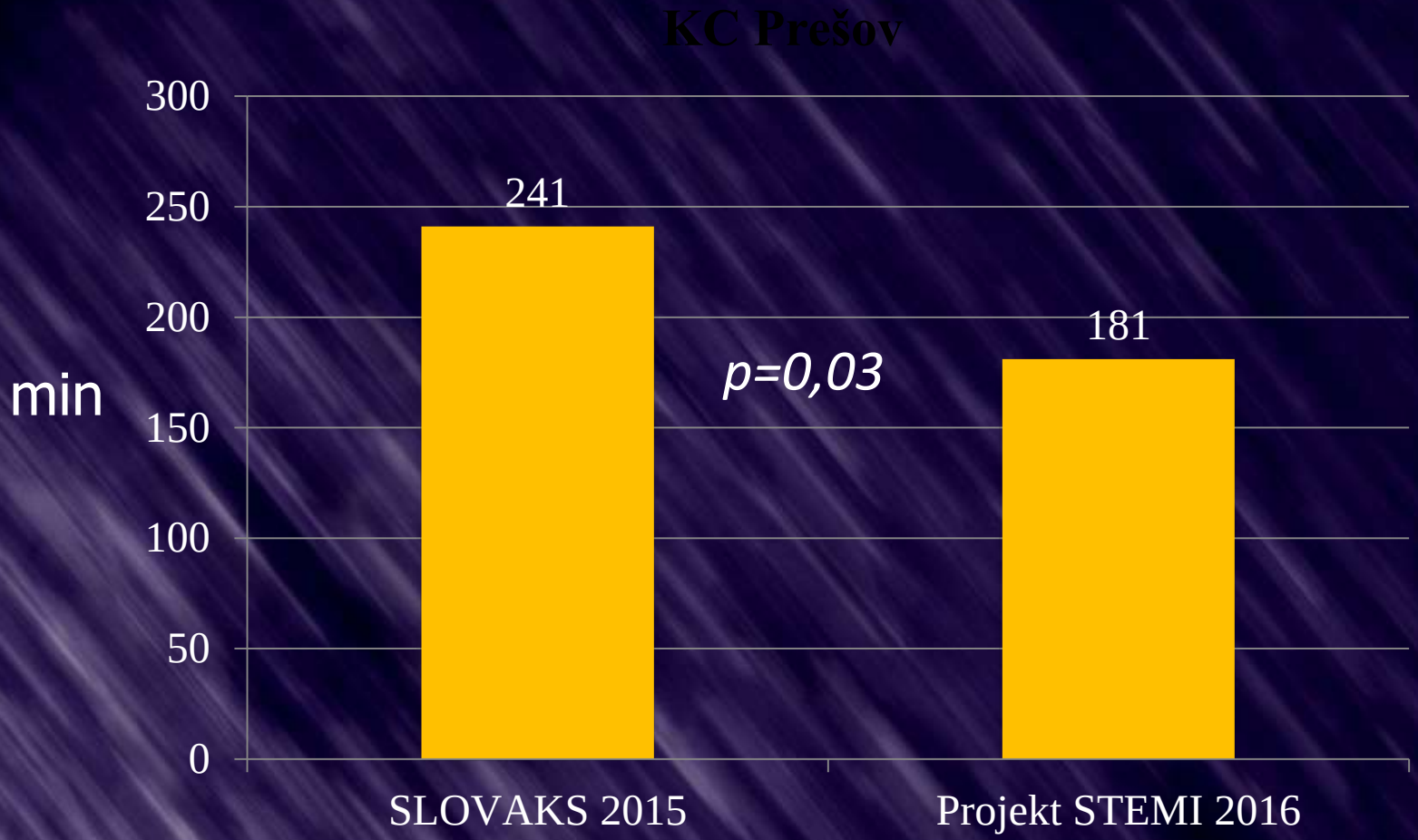
The aim of our research was to assess the benefit of the systematic implementation of the new smartphone-based communication technology "STEMI" enabling immediate ECG picture and voice consultation between an EMS crew in the field and a cardiologist in the PCI-center. The transfer of ECG was associated with 92% technical success. 5 Monthly data from 2016 were compared from the reference2 monthly data set in 2015 when the data in the same area was collected in the SLOVAKS registry. The 5-months data from 2016 were compared to the reference group from 2015, when similar 2-months data in the same area in SLOVAKS registry was collected but communication technology "STEMI" technology was not used. In the monitored period in 2016 we recorded a significant decrease in unwanted secondary STEMI transportations (34.32% vs. 12.9%, $p<0.001$) and a significant reduction in the total ischemic interval (241 min vs. 181 min, $p = 0.03$). There was no significant decrease in the subinterval of "admission-pPCI" (28min vs. 23 min, $p = 0.144$).

Studenčan M., et al, Plos one, 2018,13(11)

Secondary transportation decrease



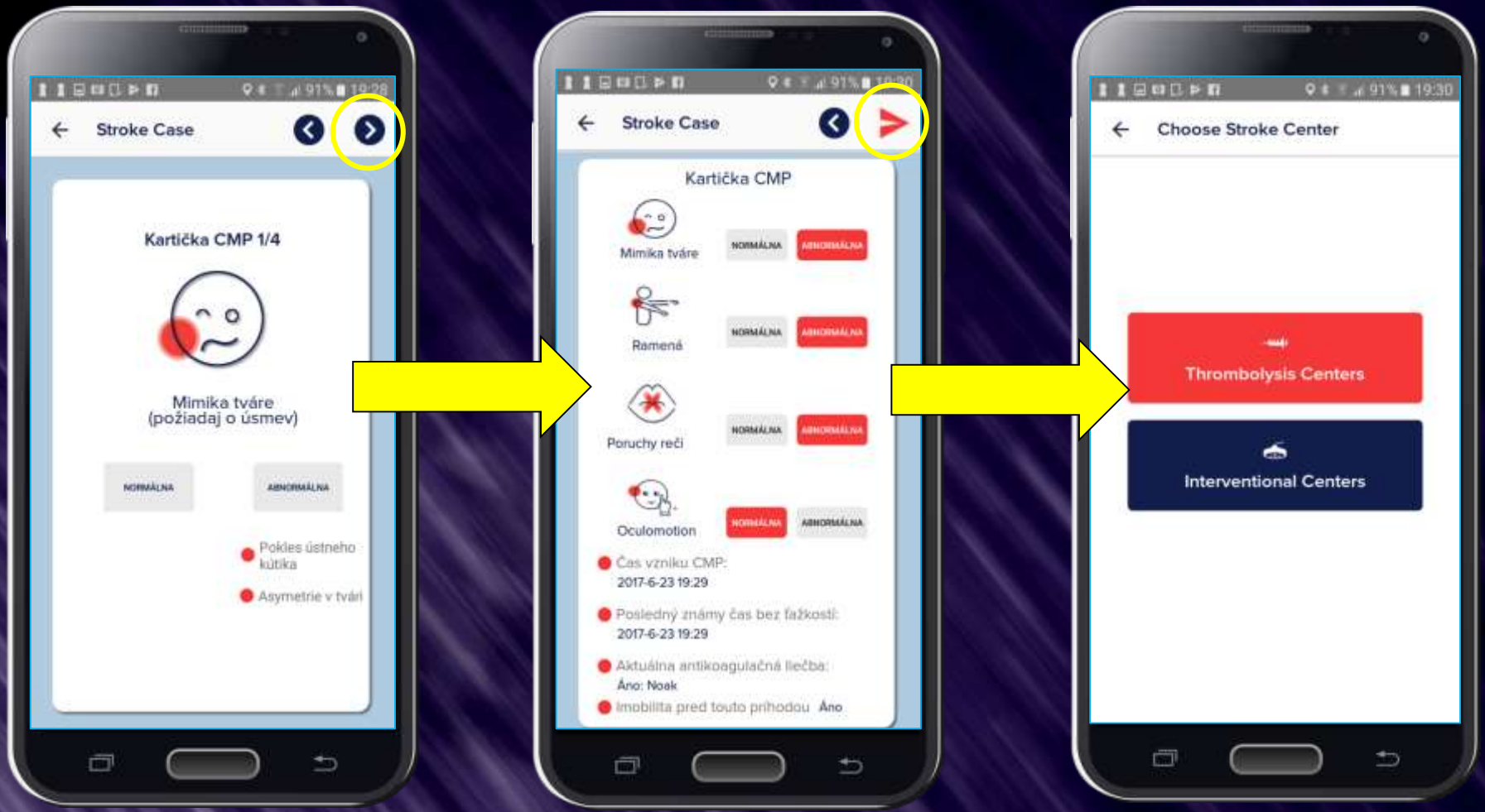
Total ischaemic interval decrease



STEMI®


100% 9:52
STEMI
STEMI
STROKE
Ready to save lives
View Case History
Show Nearby PCI Centers

Modul STROKE dostupný od r.2017



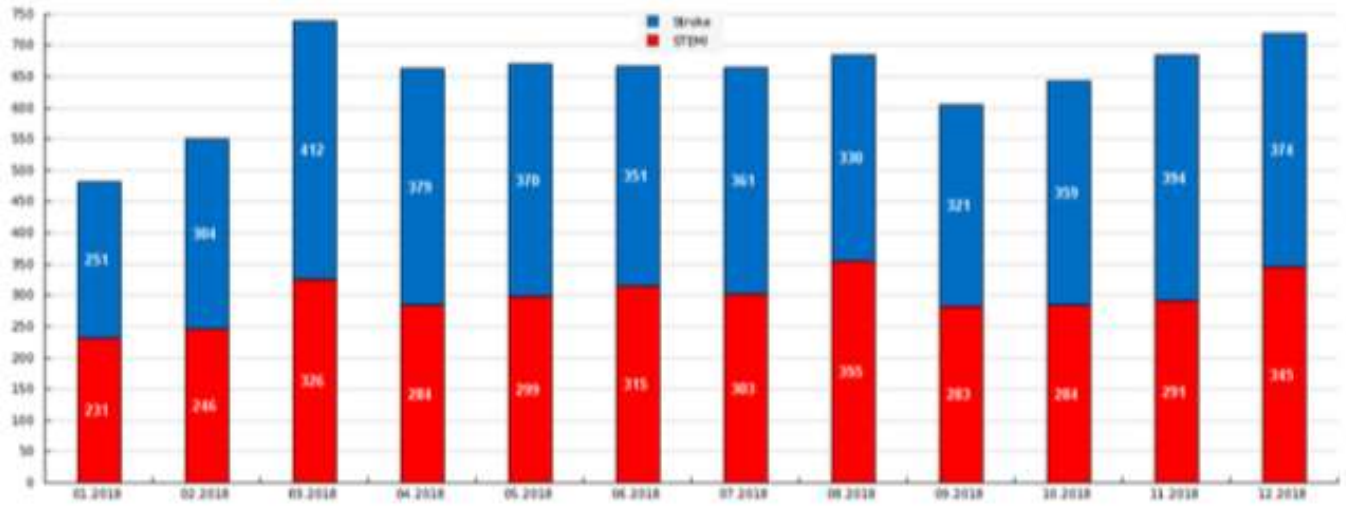
Number of STEMI and STROKE transmissions

STEMI

STEMI Report (obdobie 01.01.2018 - 31.12.2018)

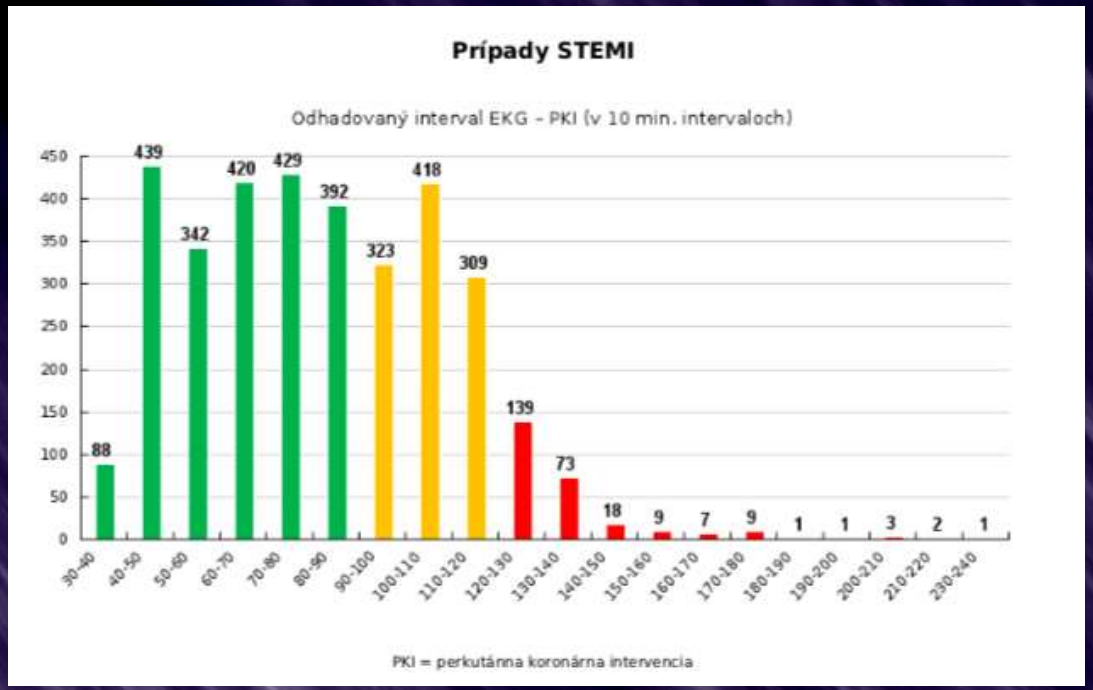
STEMI Global, s.r.o.

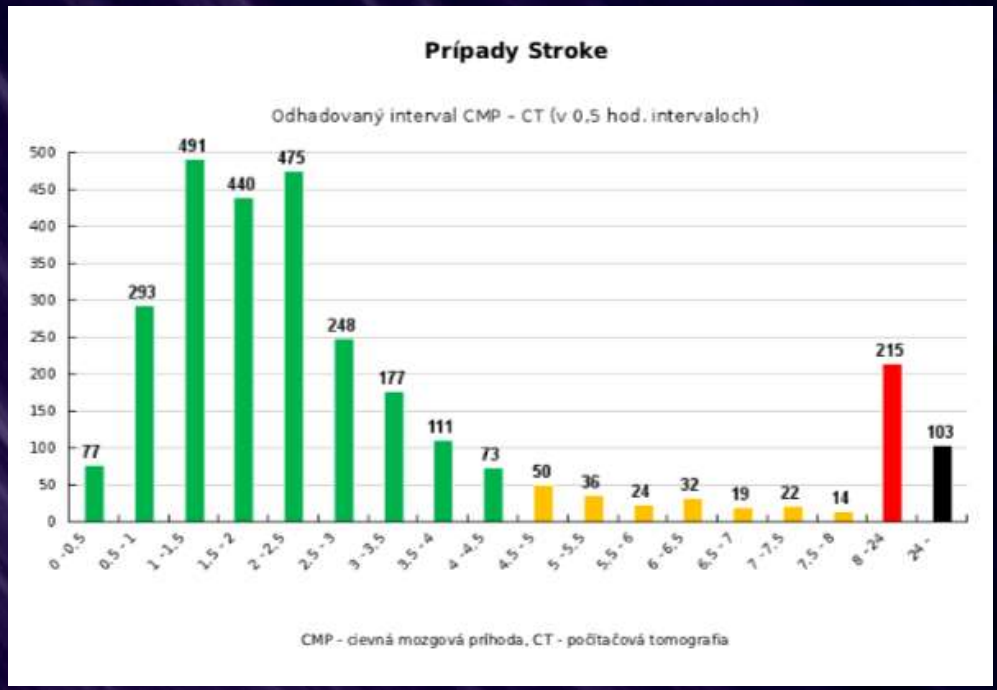
Za dané obdobie bolo prostredníctvom technológie STEMI uskutočnených 7768 žiadostí o konzultáciu



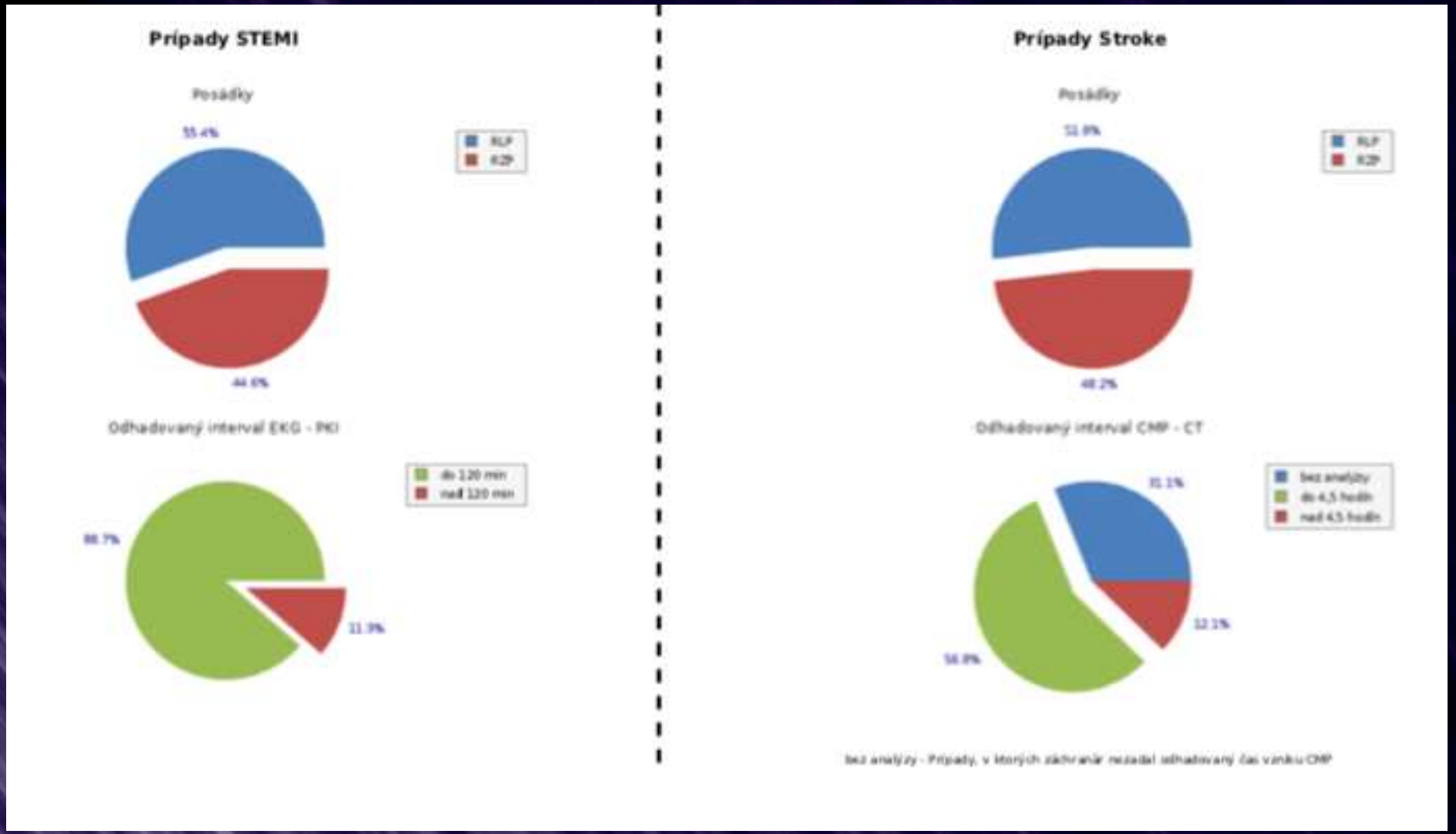
Mesiac	01.2018	02.2018	03.2018	04.2018	05.2018	06.2018	07.2018	08.2018	09.2018	10.2018	11.2018	12.2018	Spolu
STEMI	231	246	326	284	299	315	303	335	283	284	291	345	3362
Stroke	251	304	412	379	370	351	361	330	321	359	394	374	4206
Spolu	482	550	738	663	669	666	664	665	604	643	685	719	7768

Automatic time interval analysis

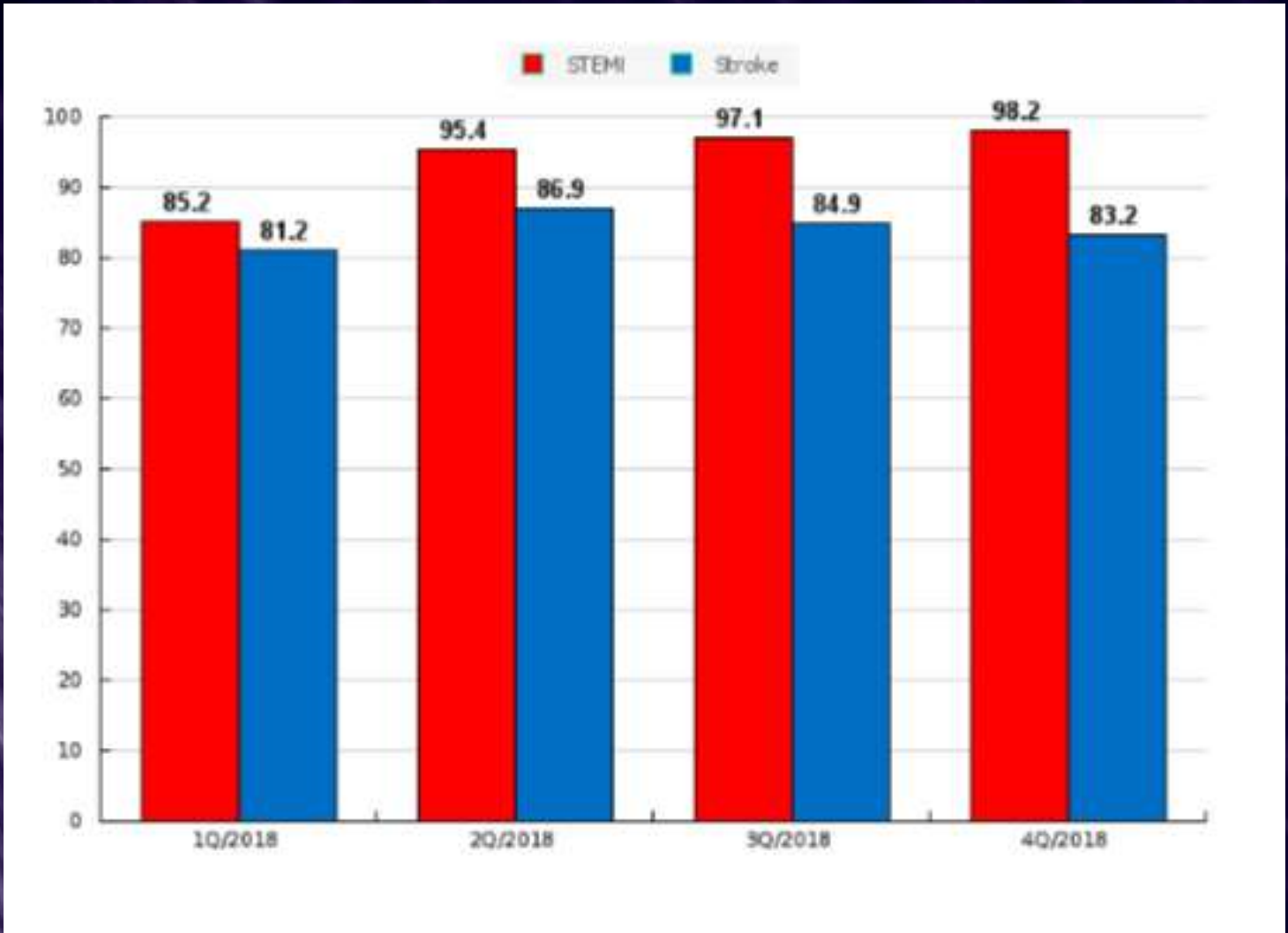




Automatic time interval analysis



Technical succes



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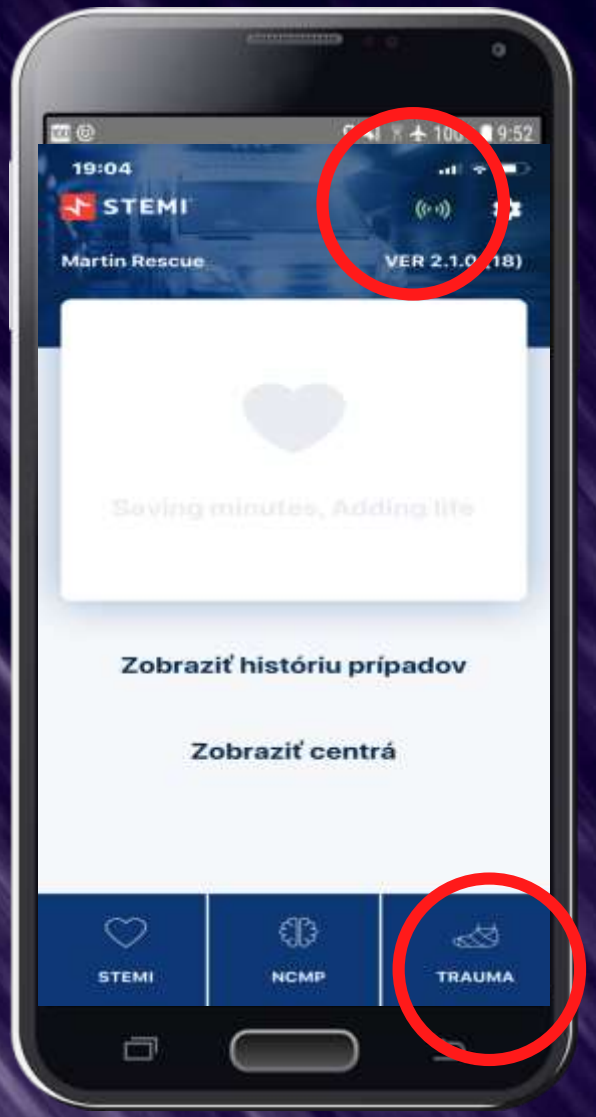
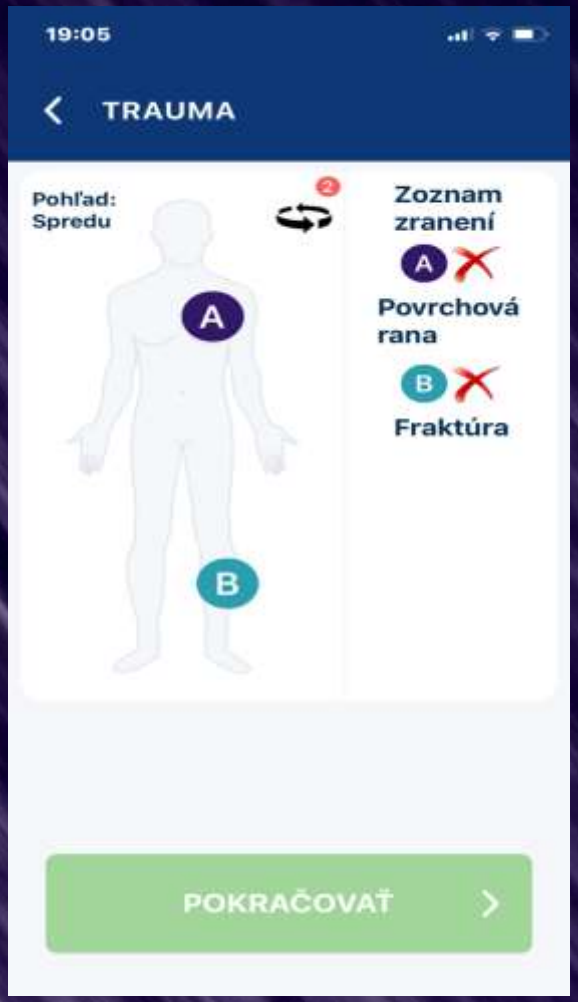
Version 2019

Záchranár



Záchranár


19:05
TRAUMA
Pohľad:
Spredu
Zoznam
zranení
A
Povrchová
rana
B
Fraktúra
A
B
POKRAČOVAŤ

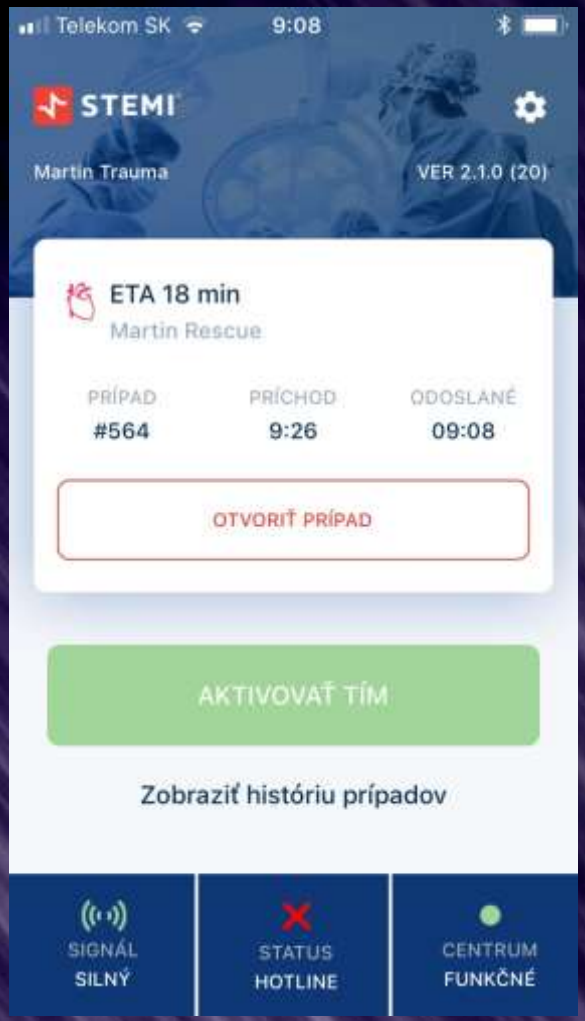

19:05
TRAUMA
Pohľad:
Spredu
Zoznam
zranení
ZRUŠIŤ
POTVRDIŤ
Povrchová rana
Pomliaždenie
Tržná rana
Rezná rana
Bodná rana
Fraktúra
Popálenina
Amputácia

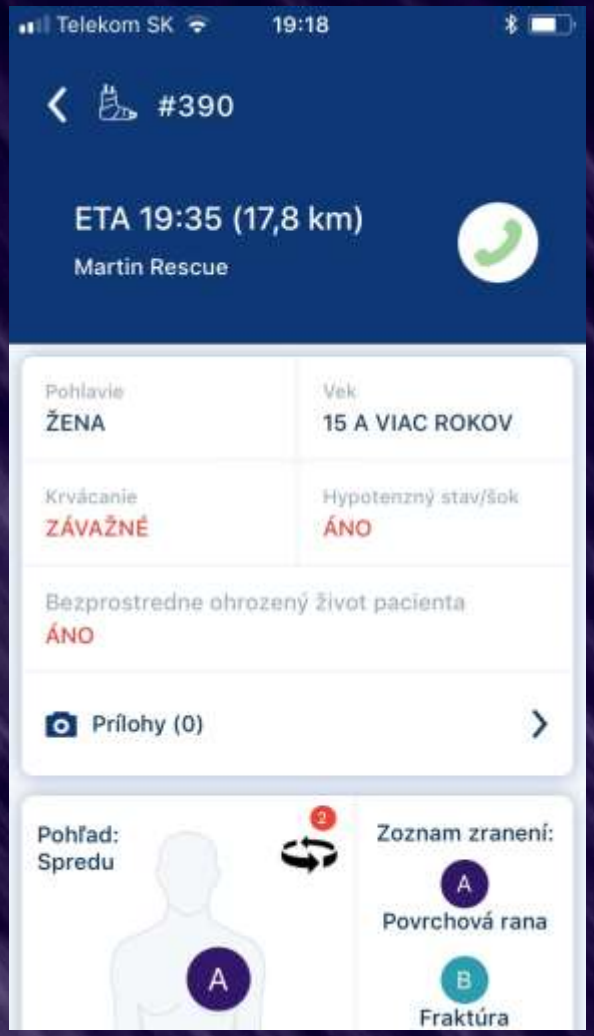
Záchranár

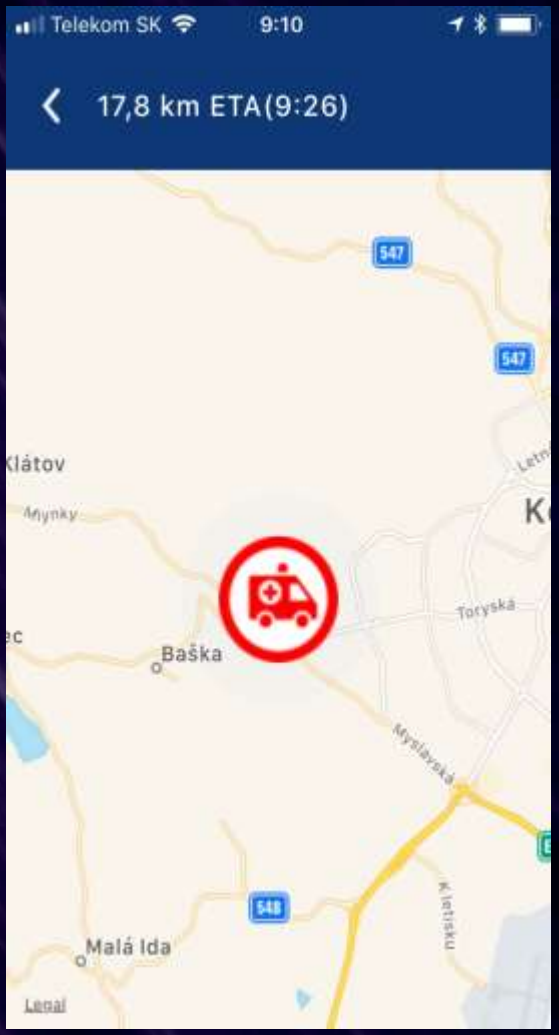

19:06
4G
TRAUMA
Prítomnosť krvácania
Áno
Nie
Závažnosť krvácania
Nezávažné
Závažné
Hypotenzný stav alebo šok
Áno
Nie
Bezprostredne ohrozenie život pacienta
Áno
Nie
Pridať prílohy
VYBRAŤ CENTRUM


19:16
PRÍLOHY (0)
FOTO 1
FOTO 2
FOTO 3
FOTO 4

Traumatologické pracovisko

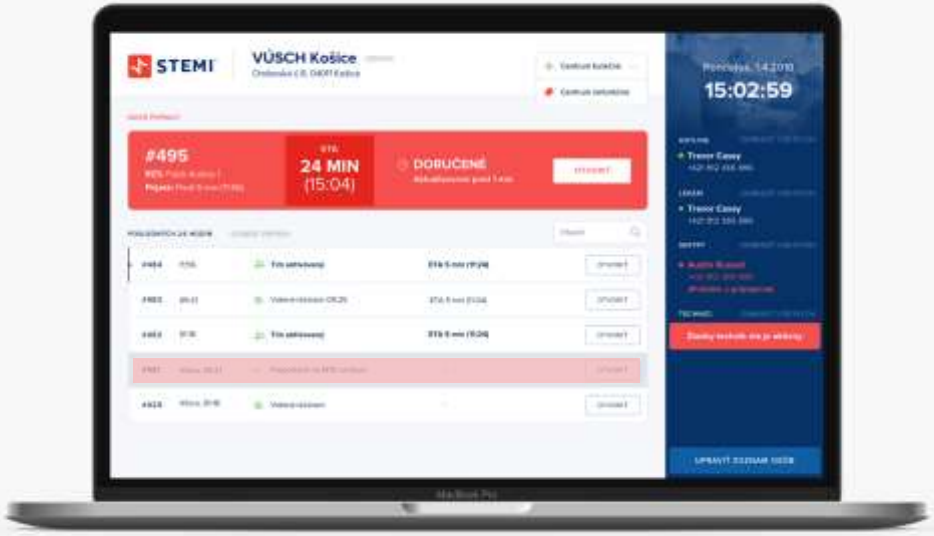






Traumatologické pracovisko

Lokálny dashboard



STEMI®

Startup Awards 2016
Category Society
1.st price

IT product of the year
2018
1.st price

Ďakujem za pozornosť

Martin Studenčan

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PREŠOV