



ZENTRALINSTITUT FÜR DIE  
KASSENÄRZTLICHE VERSORGUNG  
IN DEUTSCHLAND

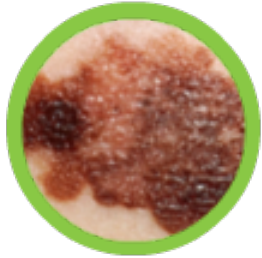
Contribution/Abstract  
Tracking Regional Variation in Healthcare  
Berlin, September 13th & 14th, 2017

## Early diagnosis of melanoma in remote GP offices

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# MELANOMA

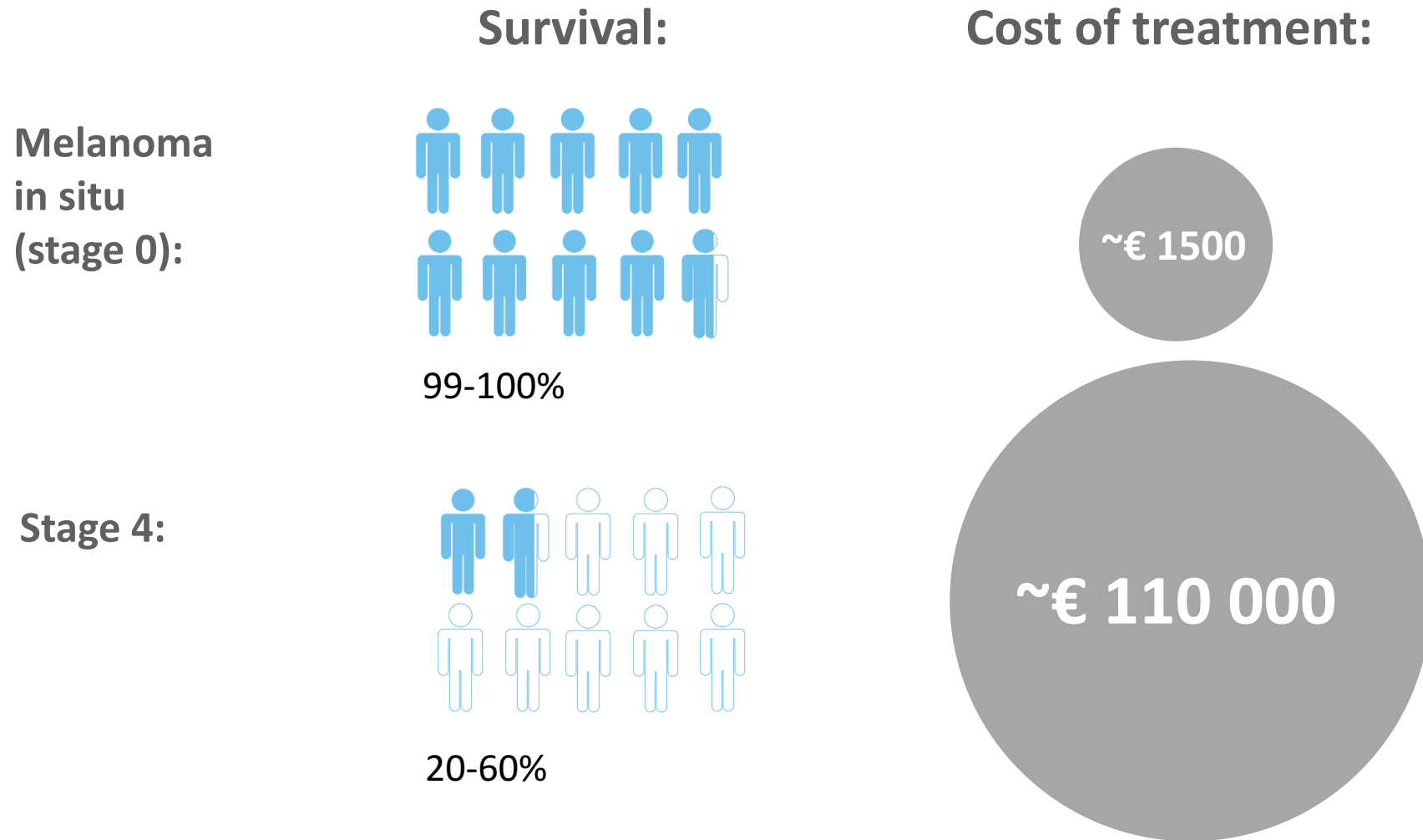


**55 000 – melanoma mortality in the world**

*60 in Estonia (C43) – population 1,3 M*

*3000 in Germany (C43) – population 82,7 M*

# EARLY DETECTION IS CURCIAL



*If detected early (0, I, IA), the survival rate of melanoma is 100%*

## GOAL OF TELEDERMOSCOPY PROJECT

- 1) TO REMOVE BARRIERS OF LACK OF SPECIALISTS,
- 2) LESSEN THE BURDEN OF NON-CRITICAL CASES FOR DERMATOLOGIST

## METHODS

- The aggregated data of patients referred for teledermoscopy diagnosis in period of **February 8, 2013 until July 20, 2017** was analysed.
- A total of **2677 case referrals** came from **14 GP offices** outside of the capital city of Tallinn and county of Harjumaa.
- **8 consulting dermatologists assessed images** and data for further action along with initial diagnosis.

**GOAL: 1) REMOVE BARRIERS OF LACK OF SPECIALISTS,  
2) LESSEN THE BURDEN OF NONCRITICAL CASES FOR DERMATOLOGIST**

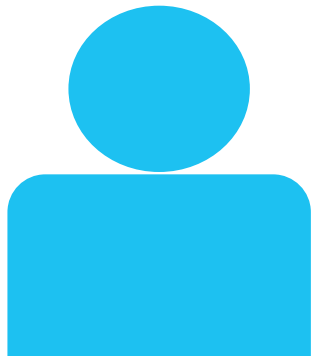
Image of suspicious moles  
at local primary care clinic  
with a dermascope (nurse)



Remote diagnosis by  
dermatologist in 48 h



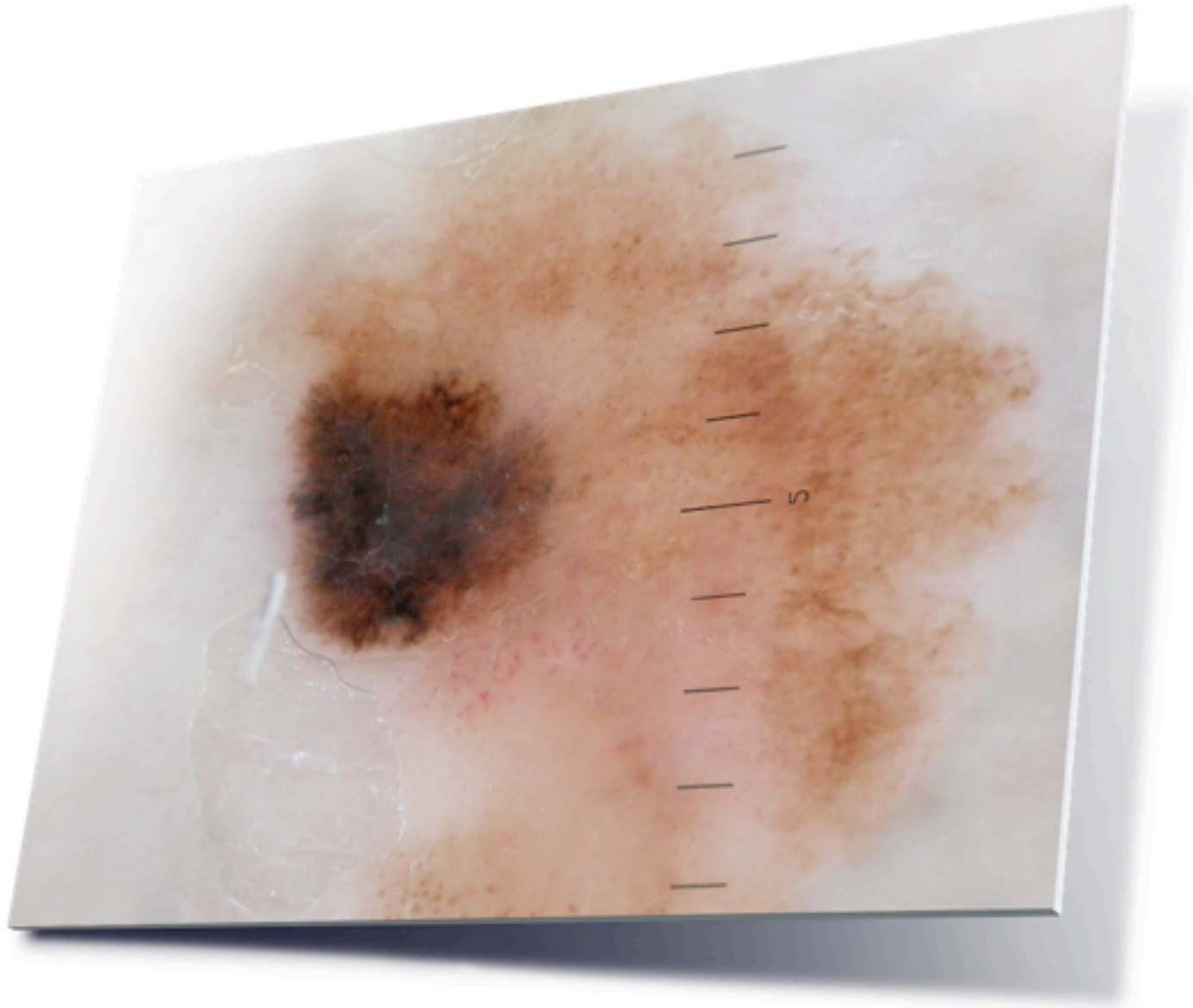
DERMTEST  
SOFTWARE  
PLATFORM





**Local Family doctor – 15 minutes**

# DERMOSCOPY IMAGE



## Digital dermatoscope in the hands of GPs

Certified dermatoscopes used





**The average time spent for teleconsultation :  
3 minutes and 20 seconds**

# RESULTS FROM ESTONIA

2,677

Lesions from rural areas

1-11

Lesions per appointment

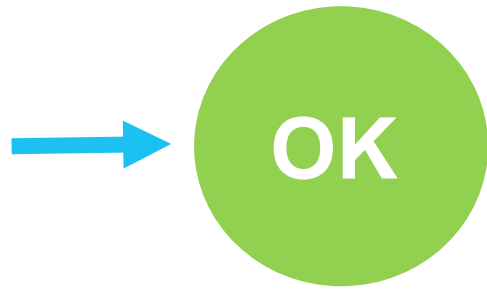
1,7

Mean

1

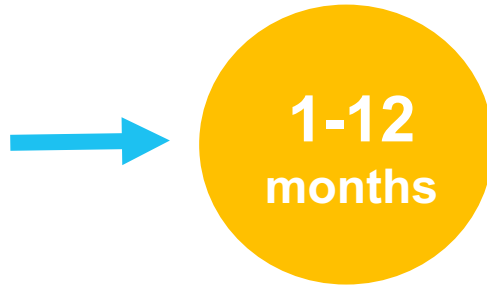
Mode





**45% of cases did not need further action**

*Seborrhoeic keratosis were diagnosed in 573 (21%) cases.*



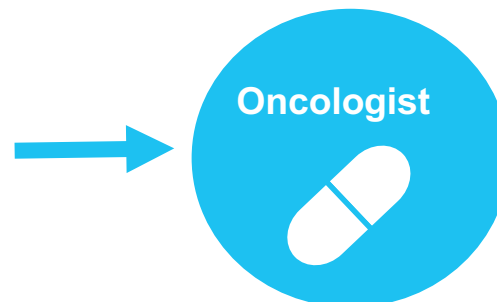
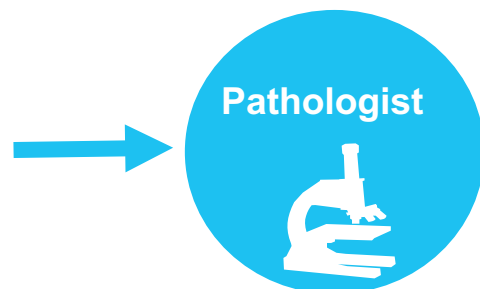
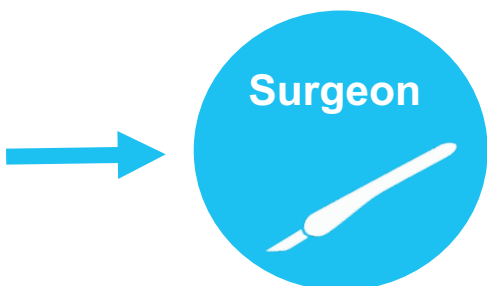
**35% were kept for follow-up:**

*1 month (4%), 3 months (9%), 6 months (18%) and 1 year (68%)*

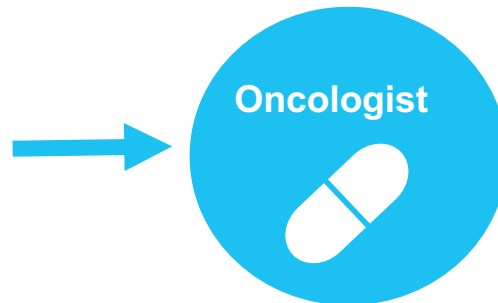
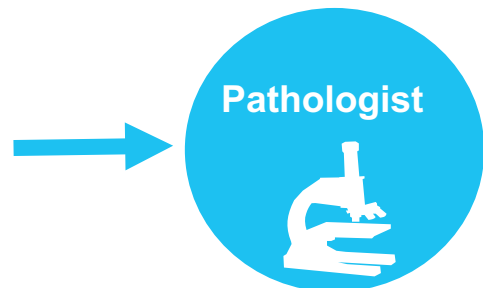
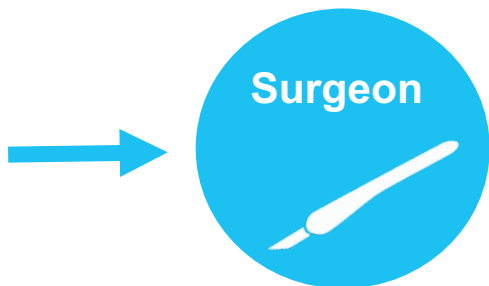
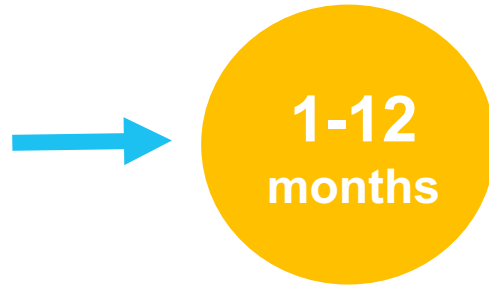
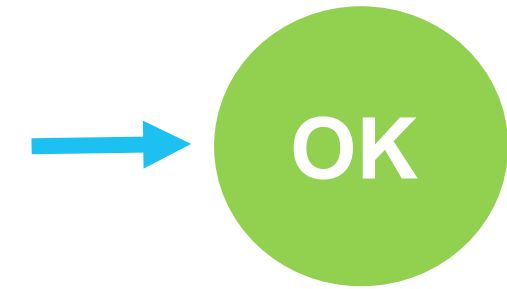


**21% were referred to specialist doctor**

*Melanoma, other malignant neoplasms diagnosed in 61 (2%) cases:  
C44 in 34 times, C43 in 13 and D03 in 17 times*



SUPPORT FOR PATIENTS AND DOCTORS ALONG THE PROJECT



# BETTER QUALITY TRIAGE



**No action**



**Follow-up 1-12 months**

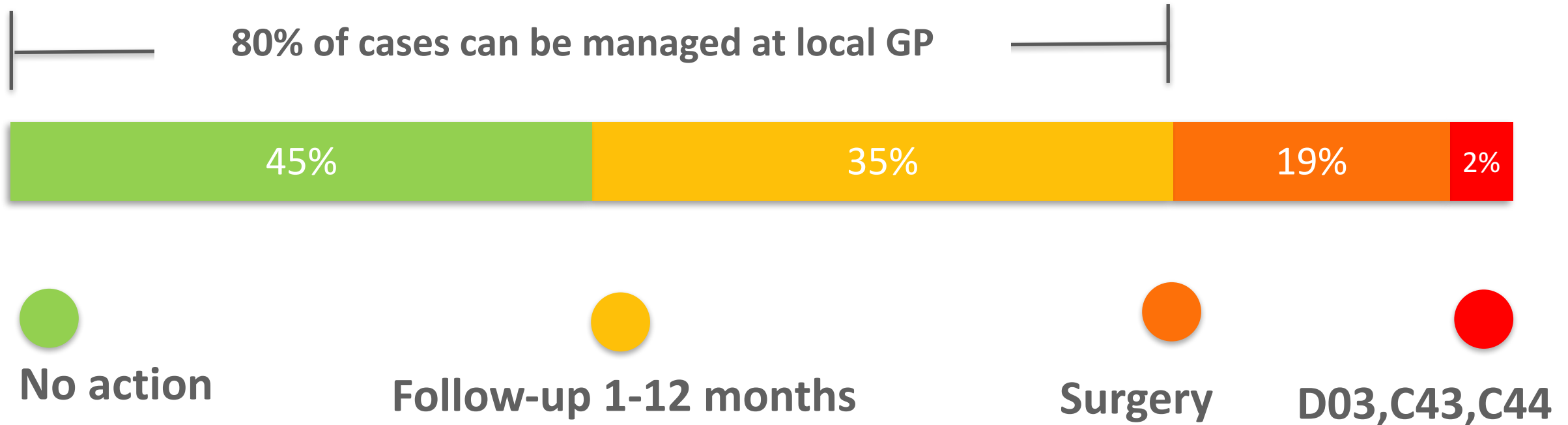


**Surgery**



**D03,C43,C44**

# LOCAL DERMATOLOGY LEVEL QUALITY ACCESS AT GP



# REGIONAL VARIATION OF MELANOMA MORTALITY (2010-2014 vs 2005-2009)

Even though Germany implemented a skin cancer screening program in 2010, a drop in mortality due to malignant melanoma could not be observed so far (Stang 2015).

	2010-2014 average vs 2005- 2009 average - absolute mortality (men)	2010-2014 average vs 2005- 2009 average - absolute mortality (women)	2010-2014 average vs 2005- 2009 average - population adjusted mortality (men)	2010-2014 average vs 2005- 2009 average - population adjusted mortality (women)
Baden-Wurtemberg	127%	110%	115%	99%
Bavaria	118%	102%	105%	97%
Berlin	105%	107%	96%	98%
Brandenburg	142%	117%	127%	106%
Bremen	161%	105%	150%	111%
Hamburg	139%	90%	133%	88%
Hesse	127%	113%	115%	110%
Mecklenburg-Vorpommern	129%	131%	115%	123%
Lower Saxony	128%	106%	114%	97%
NRW	144%	119%	134%	111%
Rheinland-Pfalz	120%	108%	102%	99%
Saarland	112%	92%	103%	77%
Saxony	112%	98%	104%	89%
Saxony-Anhalt	142%	123%	127%	120%
Schleswig-Holstein	128%	159%	114%	142%
Thuringia	107%	93%	98%	96%
<b>Germany</b>	127%	110%	115%	105%

## TELEDERMOSCOPY AS A SCREENING QUALITY ENCHANCER

- A possible explanation is that in the program, GPs search the skin for suspicious lesions with the naked eye (Pflugfelder 2013).
- Addition of a dermatoscope could increase sensitivity, but only if performed by an experienced examiner (Herschon 2012 and Kittler 2002).
- Teledermatology is not inferior to a face to face visit at the dermatologist (Tan 2010) if the image quality is good (Van der Heijden 2013).



## ACCESS IN REMOTE AREAS AND PEACE OF MIND

- Regions without easy access to dermatologists would have a more efficient alternative to the conventional screening programme at the GP (Tan 2010).
- The project example from Estonia has shown the feasibility of a remote teledermatology service for patients and has proven to be a good way to triage suspicious lesions.
- Starting a pilot in Germany in September 2017.

# BENEFITS TO ALL THROUGH COLLABORATION ACROSS REGIONS



- Fast specialist answer
- Local access
- Personal report
- Prevention tips
- Follow-up easy and clear pathway
- Secure



- Empowered
- Enhanced service
- Provide access locally
- Triage quality
- Quick answer, no phone
- Higher respect from patients



- Focus on critical cases
- Work process optimized
- Screening more accurate
- Surgery quality
- Pathology quality

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