ContextVision

Danske Bank

Sep 12th 2019

Fredrik Palm - CEO

A software company specialized in image analysis & artificial intelligence for the medical technology industry

Established, profitable business – market leaders

Significant AI competence - specialized in imaging

Digital pathology – huge market potential

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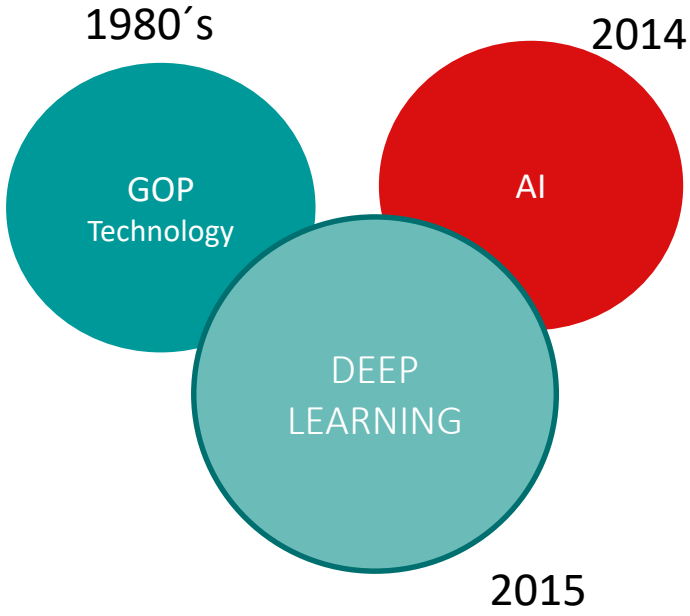
ContextVision short facts

- Listed on Oslo stock exchange
- ~ 50 Employees (50% within R&D)
- Two sites in Sweden + local sales offices
- +30 year history with technical roots from Linköping University
- +250 000 system installations world wide

Taking a lead in deep learning

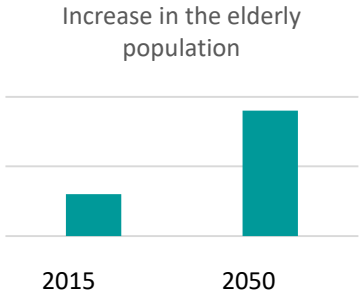


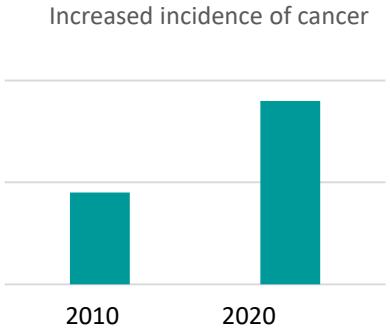
In 2015 we decided to assume leadership in image analysis applications of the latest technologies within machine learning, deep learning for

- Medical imaging
- Digital pathology

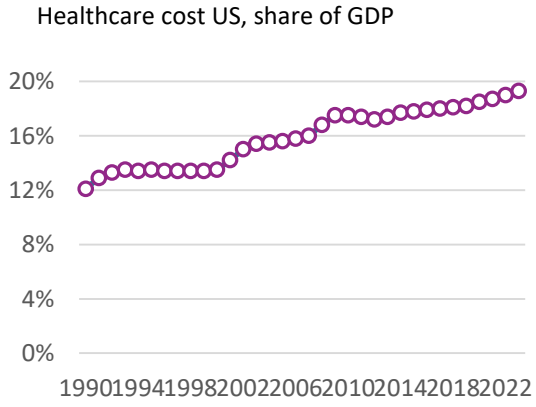
- *Aiming towards treatment guidance*

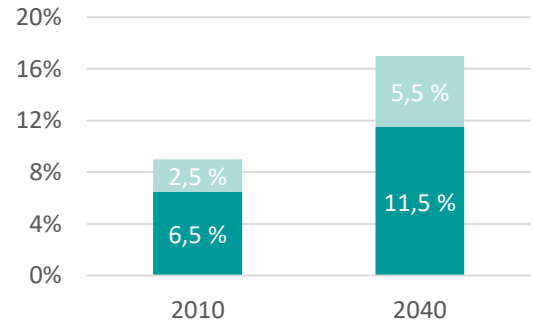
Healthcare challenges





Source:
https://www.nia.nih.gov/research/publication/global-health-and-aging/assessing-costs-aging-and-health-care





Sources:
Cap Gemini (EU) and Sisko A.M. et al. (2014), "National health expenditure projections, 2013–23: faster growth expected with expanded coverage and improving economy"

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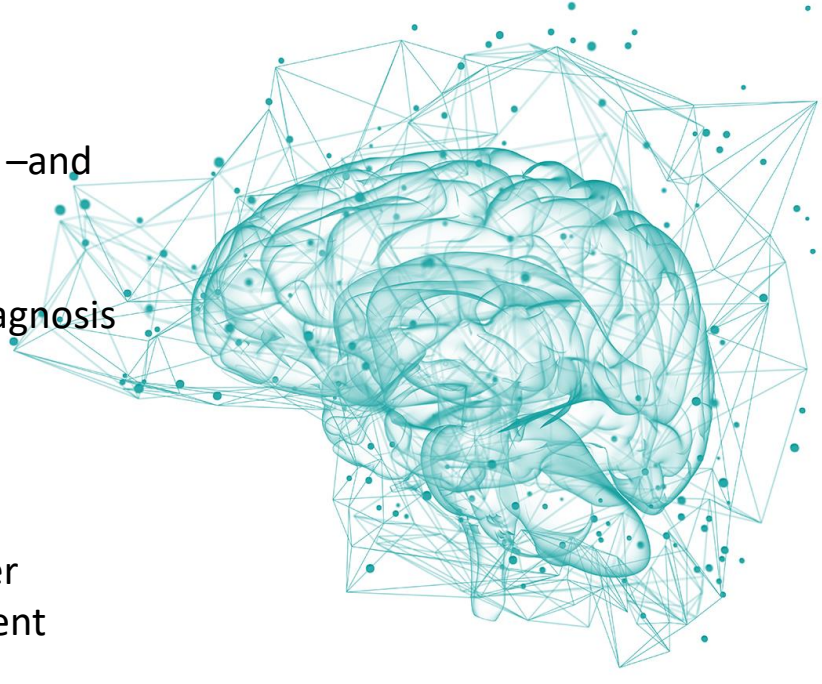
Major potential for AI based solutions

NEEDS

- Quicker diagnosis –and earlier treatment
- More accurate diagnosis – more correct treatment
- Better outcome prediction – better individual treatment decisions



SOLUTIONS

Automation

Decision support tools, e.g.

- Detection
- Measurements
- Diagnosis
- Prognostication
- Treatment guidance

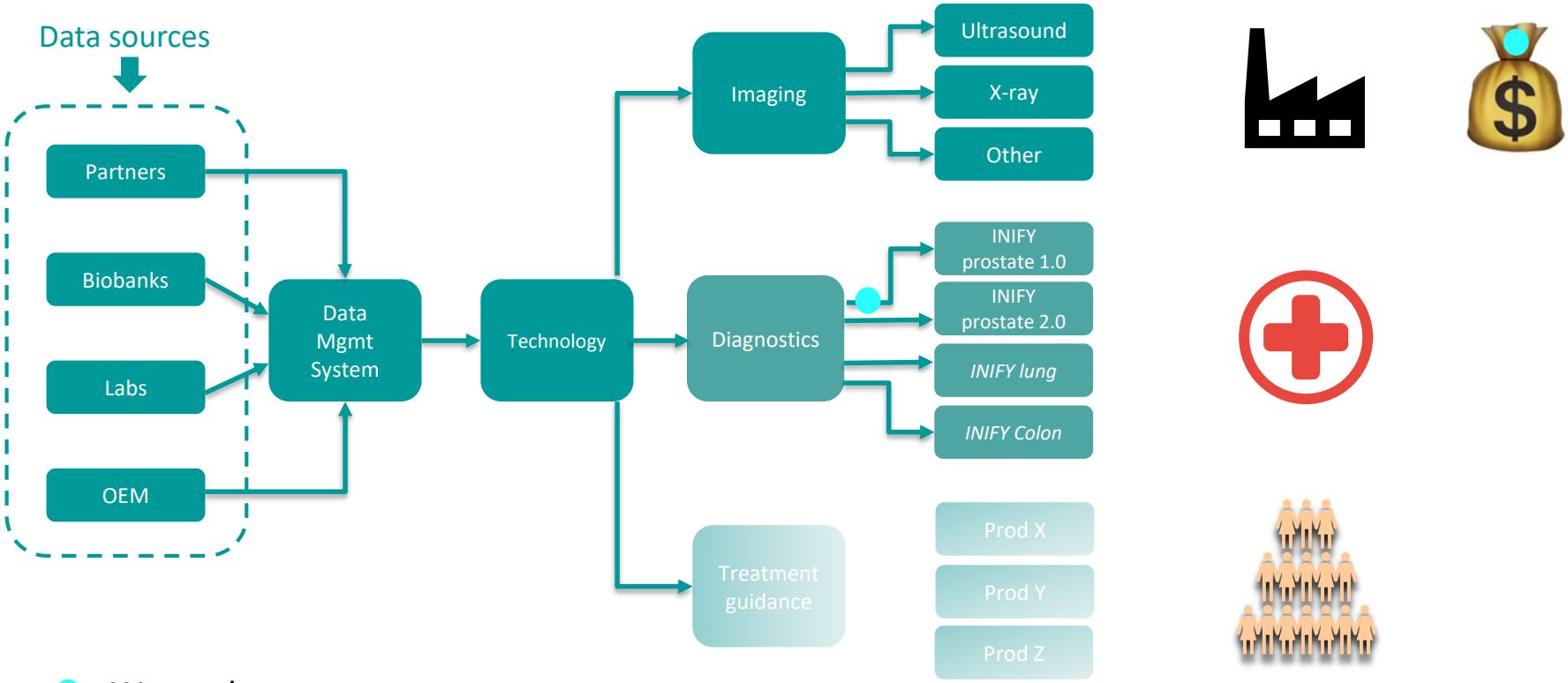
Highly accurate deep learning algorithms

Position	User	Team	Date	Score (Cohen Kappa)
1	jaylee	Lunit Inc.	July 31, 2017, midnight	0.8993
2	desuto	ContextVision	May 15, 2018, 9:49 p.m.	0.8830
3	zlz0414	HMS-MGH-CCDS	April 6, 2017, midnight	0.8806
4	farhad	VCA-TUe	March 30, 2017, midnight	0.8729
5	tkdgnsehfdl	Deep Bio Inc.	Jan. 4, 2018, midnight	0.8640
6	kfukuta	MIL-GPAT	April 6, 2017, midnight	0.8567
7	LiuWei	JD.com Inc.	Sept. 26, 2017, midnight	0.8567
8	vladoovtcharov	Indica Labs	April 6, 2017, midnight	0.8554
9	chengshenghua	HUST-C	Oct. 28, 2017, midnight	0.8439
10	Simon	Mechanomind Inc.	Feb. 1, 2018, midnight	0.8423
11	tkdgnsehfdl	Deep Bio Inc.	Jan. 3, 2018, midnight	0.8381
12	wangyx	SYSU	April 19, 2018, 4:24 a.m.	0.8380
13	chengshenghua	HUST-C	Dec. 5, 2017, midnight	0.8172

Second place in the international competition “Camelyon Challenge”

The goal of this challenge was to evaluate algorithms for automated detection and classification of breast cancer metastases in whole-slide images of histological lymph node sections

Contextvision - Process of Excellence



Healthcare megatrends benefits ContextVision

- Need for cost control and accuracy

  Health care costs are skyrocketing all over the world. Governments and institutions regard diagnostics capabilities and efficient procedures as vital in tomorrow's health care system. Medical imaging is a key element.

- Ultrasound the global diagnostics trend

  Modern ultrasound is safe and accurate. Units have become affordable, more compact, and easier to use. Therefore, ultrasound is now being used in a growing number of medical applications all over the world. ContextVision is a software technology leader in this field.

- Digital Pathology emerging

  Clinical histopathology is undergoing digitalization just as radiology has become digital. This opens up for new innovative software to support decision-making within pathology in the future.

Medical Imaging

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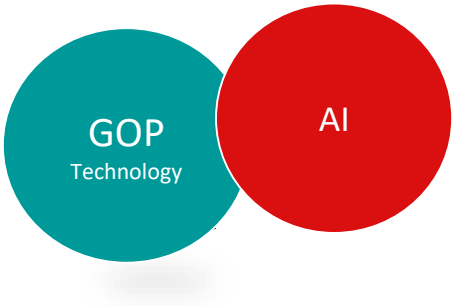
Image enhancement

SINCE 1980´S



- Global market leader based on the proprietary GOP technology

- During 2018 the company started to develop a new generation of image enhancement products, by combining the GOP technology with deep learning (AI) algorithms.

STATE-OF-THE-ART

The product portfolio
includes state-of-the-art image enhancement software for 2D/3D/4D ultrasound, MRI, X-ray and mammography.

New products
are continuously developed to help our customers meet the requirements in healthcare and we intend to stay market leaders.

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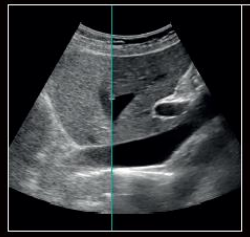
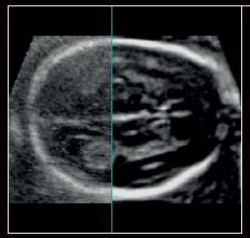
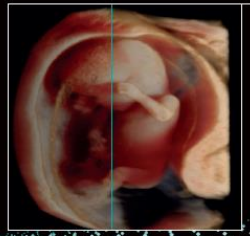
State-of-the-art Image enhancement and Visualization



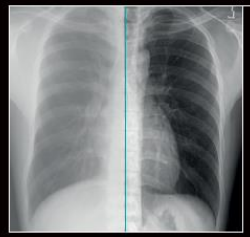
Ultrasound 2D
US PlusView™ 2.0



Ultrasound 3D/4D
GOPiCE® 2.0



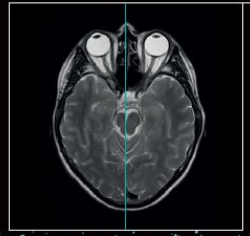
Ultrasound 3D/4D & Visualization
REALiCE®



Radiography
GOPView® XR2Plus

Mammography
GOPView® Mammo3

Interventional Radiology
GOPView® iRVUltra



MRI
GOPView® MRI2Plus

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Altumira™ - First AI-based product line

- A technology synthesis with GOP and deep learning technology
- Addresses image quality challenges
- Gold standard image quality
- Static & dynamic X-ray

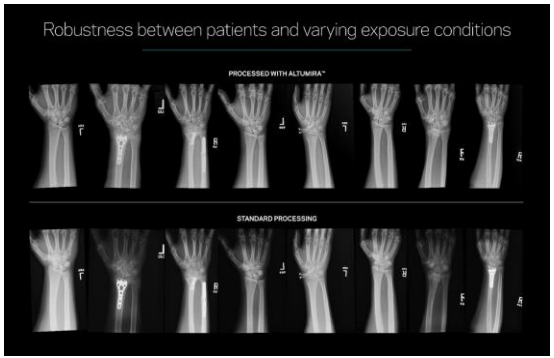

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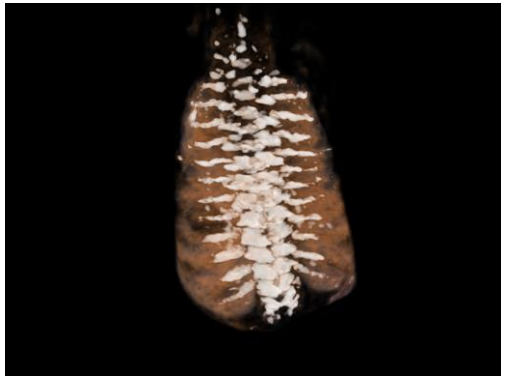
Image enhancement - examples

Photographic View



Skeletal View

Approaching reality -
– 3D/4D image visualization

REALiCE®

REALiCE is a unique way of visualizing 3D/4D ultrasound images. The novel software enables a realistic image of the fetus.

The software presents the image in different views, providing the clinician with vital information for accurate fetal diagnosis.

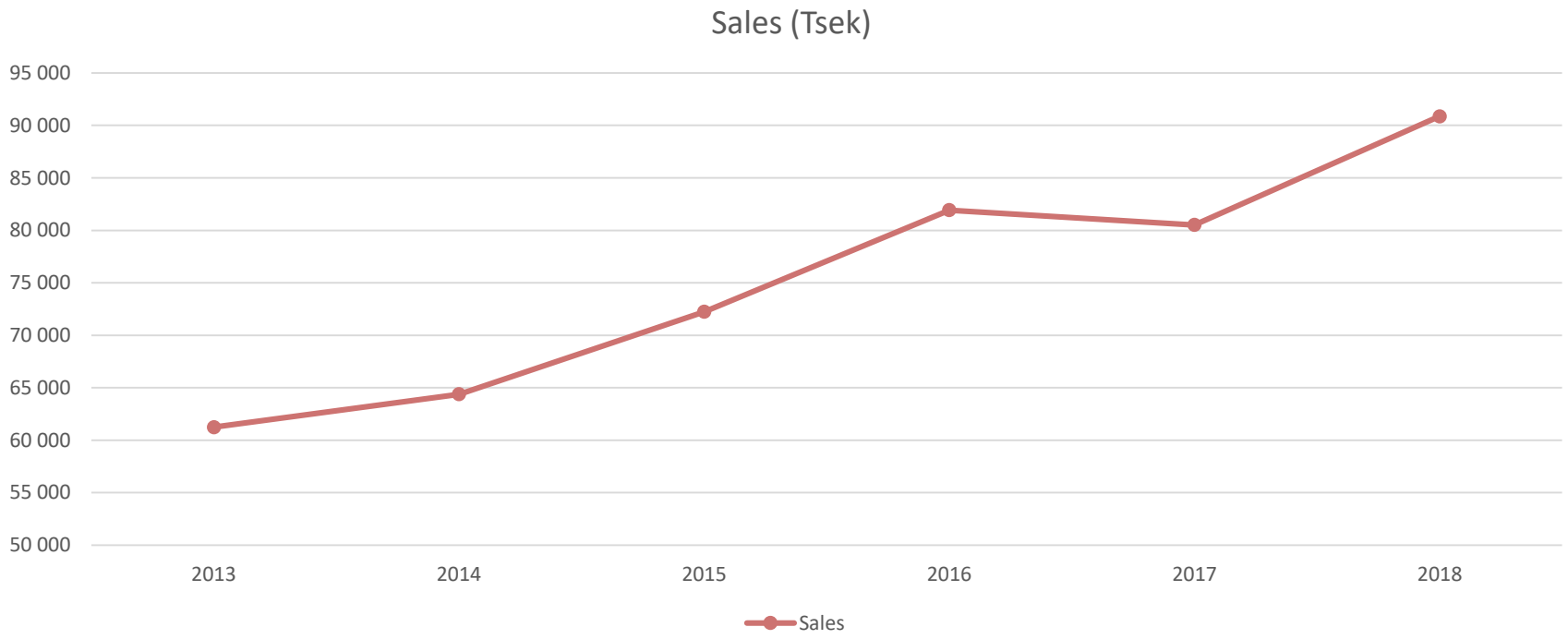
OEM Sales and Partnership

- Business to business sales built on partnership with Original Equipment Manufacturers (OEM)
- The software is integrated into the imaging equipment at the time of production
- Our expertise provides added value through customization of our software to meet specific equipment requirements and to adapt to specific clinical applications
- Revenues are based on license fees, Non-Recurring Engineering (NRE) fees during the initial customization phase and service agreements
- Sales volumes are driven by the customers' production rates and product cycles

Serving a global market

- The tangible image enhancement market is today worth around MSEK 200
- The market continues to grow; ultrasound CAGR about 3-6%
- ContextVision has up to 50% market share in key segments
- ContextVision serves about 60 customers throughout the world
- Typical customers are global high-end equipment manufacturer as well as regional and specialized manufacturers
- >250 000 systems are equipped with our software

Sales development 2013-2018



Digital pathology
– a great potential for growth

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Digital pathology
– a great potential for growth

Great need for decision support tools

- Challenging image evaluations
- Lack of pathologists
- Treatment decisions highly dependent of the pathologist´s interpretation of images
- Today many patients are treated inaccurately or too late

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A young, rapidly growing market

Digital pathology is a rapidly growing market driven by the lack of pathologists in almost all countries in the world

- Provides easy access to specialists
- Creates a new workflow
- Digital images opens up for automated image analysis

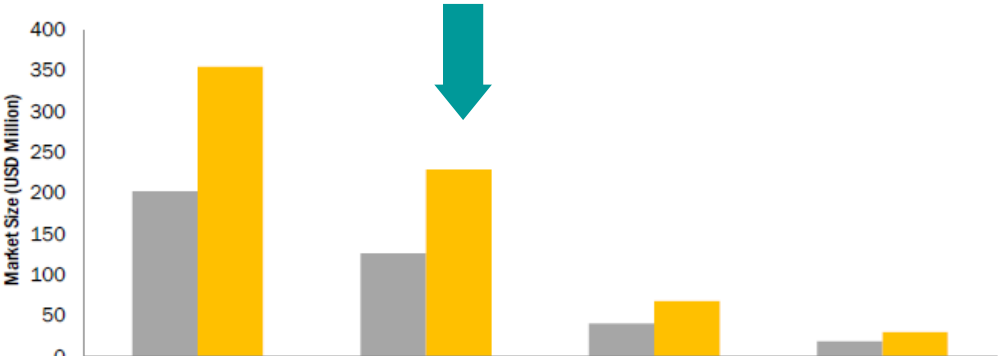
Automated image analysis has the potential to dramatically *improve the workflow and increase the quality of care.*

ANALOGUE

DIGITAL

The Digital Pathology Market

Software market estimated to 228 MUSD by 2021



	Scanners	Software	Communication Systems	Storage Systems
2016	201.7	125.5	39.4	17.8
2021	354.5	228.2	67.2	29.2
CAGR	11.9%	12.7%	11.3%	10.4%

Estimated market for decision support tools	
2020	20 MUSD
2022	250 MUSD
2024	700 MUSD

Note: Internal estimates

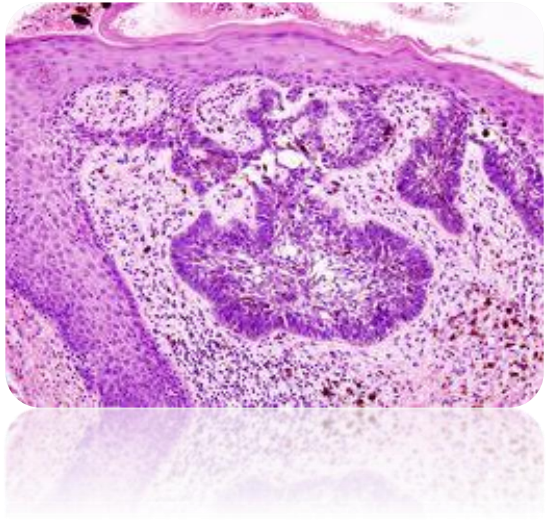
From: Markets&Markets

Source: Digital Pathology Association (DPA), the College of American Pathologists (CAP), American Society for Clinical Pathology, U.S. Department of Health and Human Services, Canadian Association of Pathologists, European Society of Pathology, Pathological Society of Great Britain and Ireland, International Academy of Pathology, World Health Organization (WHO), the International Association of Chinese Pathologists, Annual Reports, Press Releases, Expert Interviews, and MarketsandMarkets Analysis

Digital Pathology – First product

The company has started to develop a portfolio of Decision Support Tools, INIFY®,
for diagnosis of the major cancer diseases

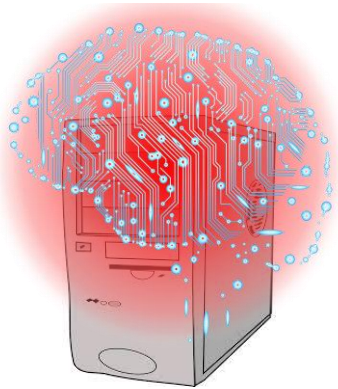
BETA installations ongoing!



SCAN PROSTATE BIOPSY

APPLY DL ALGORITHM

SORT SLIDES – “WORST FIRST”



591812		Suspicious 73%
591729		Suspicious 68%
591650		Suspicious 63%
591567		Suspicious 33%
591432		Suspicious 8%
591347		Benign
591259		Benign
591147		Benign
591063		Benign
590975		Benign
590851		Benign
590765		Benign

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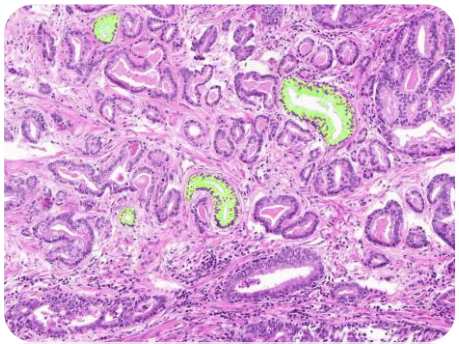
NOTE; INIFY™ Prostate is an investigational device, not yet CE-marked for clinical use

Master Annotation Method

ContextVision has developed a unique method to secure quality of the data used for AI -training with the purpose of delivering products with high precision and high accuracy

The Master Annotation method provides specific and objective annotation of cancerous tissue and serves as a guidance for selecting accurate data for training the algorithms in our deep neural networks.

Compared to non-guided annotations, this makes the annotations
- more accurate
- more consistent and
- more objective



Patent pending

Digital Pathology – Advisory Board

Advisory Board for the research program includes world leaders in the field

Prof. Anil Parwani, a professor in pathology and an important driver for the digitalization of pathology in the U.S.

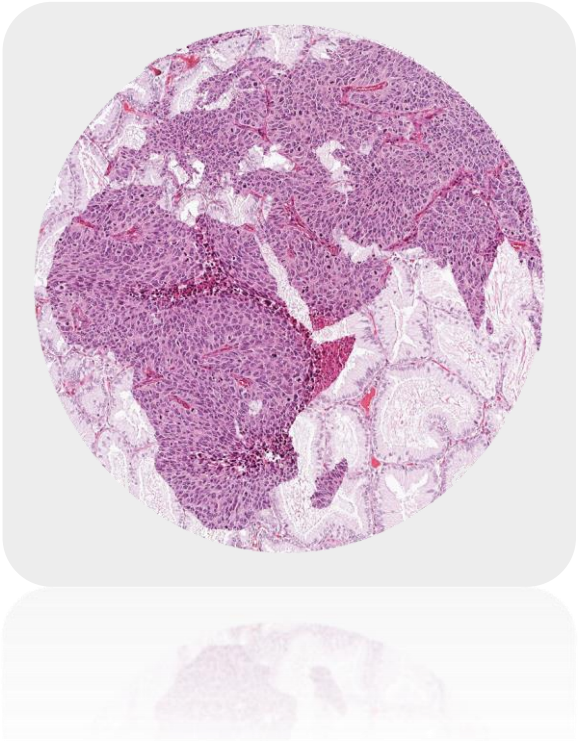
Dr. Marilyn Bui, a pathologist and researcher at Moffit cancer center in Tampa, Florida. President of Digital Pathology Assosiation (DPA) in the U.S.

Ass. Professor Jeroen van der Laak, a senior computer scientist with long expertise from image analysis within pathology, the Netherlands

Dr. Dan Ciresan, a senior researcher, a pioneer in deep learning and behind one of the key publications in deep learning

Prof. Junyo Fukuoka, a professor and clinical pathologist in Nagasaki, Japan, with high focus on education

Prof. Fredrik Pontén, a professor with a broad competence at the dept. of Immunology Genetics and Pathology at Uppsala University, Sweden



Financials six months 2019

SIX MONTHS 2019 FINANCIAL DATA

- Sales of 44.2 MSEK (41.1)
- Operating result of 9.7 MSEK (-14.3) and operating margin of 22.0% (-10.5%)
- Earnings per share of 0.96 (-0.56) SEK

The ContextVision share

- Swedish based company
- Listed on Oslo stock exchange since 1997, ticker COV
- Market Cap end of August 2019 ~ 650 MNOK
- 7 736 750 issued shares
- www.contextvision.com

OSLO BØRS
OSLO STOCK EXCHANGE

10 largest shareholders August 31, 2019

Owners (percent)	Shares	%
Monsun AS	2 248 750	29.07
Sven Günther-Hanssen	851 667	11.01
Martin Hedlund	831 666	10.75
MP Pensjon	519 049	6.71
Bernt Stavland	336 000	4.34
Auris AS	333 755	4.31
Bras Kapital AS	331 314	4.28
Danske Bank A/S	250 000	3.23
Anders Stavland	186 000	2.40
Swedbank AB	121 578	1.57

Key Ratios

KSEK	2018	2017	2016	2015	2014
Consolidated Income Statement					
Net sales	90,903	80,512	81,917	72,237	64,398
Operating profit/loss	-1,299	-1,972	5,769	6,952	6,877
Profit/loss after financial items	-1,291	-1,978	5,767	6,952	7,027
Net result	**-1,179**	**-1,706**	**4,253**	**5,338**	**5,421**
Consolidated Balance Sheets					
Intangible fixed assets	11,681	10,778	14,628	17,540	16,543
Fixed assets	3,353	3,742	527	537	704
Financial assets	323	376	323	254	985
Current assets	61,476	64,170	63,820	54,181	45,107
Total assets	**76,833**	**79,066**	**79,299**	**72,512**	**63,340**
Equity	58,562	59,347	61,426	57,036	50,753
Long-term liabilities	968	1,122	1,508	1,194	759
Short-term liabilities	17,303	18,597	16,365	14,282	11,828
Total equity and liabilities	**76,833**	**79,066**	**79,299**	**72,512**	**63,340**
Cash flow statements					
Operating activities	5,119	1,948	9,527	9,156	10,373
Investment activities	-7,501	-4,532	-2,260	-4,647	-8,403
Change in cash and cash equivalents	**-2,382**	**-2,584**	**7,266**	**4,509**	**1,971**
Key ratios					
Equity ratio, %	76.2	75.1	77.5	78.7	80.1
Operating margin, %	-1.4	-2.4	7.0	9.6	10.7
Profit margin, %	-1.4	-2.5	7.0	9.6	10.9
Return on equity, %	-2.0	-2.8	7.2	9.9	11.3
Average no. of shares	7,736,750	7,736,750	7,736,750	7,736,750	7,736,750
Result per share	-0.15	-0.22	0.55	0.69	0.70
Result per share after dilution	-0.15	-0.22	0.55	0.69	0.70
Share price (NOK) Dec 31	55.20	57.50	49.50	26.40	21.90

Income statement Six months 2019

	Six months 2019	Six months 2018	Full year 2018
Net sales	44 201	41 080	90 903
Total revenues	**44 201**	**41 080**	**90 903**
Goods for resale	-1 152	-947	-2 224
Other external costs	-8 597	-16 334	-33 150
Personnel costs	-21 070	-25 630	-50 130
Depreciation assets	-3 667	-2 488	-5 029
Write down	0	0	-1 669
Operating results	**9 715**	**-4 319**	**-1 299**
Interest income	0	0	14
Interest cost	-181	-5	-6
Results after financial items	**9 534**	**-4 324**	**-1 291**
Tax	-2 144	-7	112
Net results	**7 390**	**-4 331**	**-1 179**

Balance sheet six months 2019

	JUNE 30TH, 2019	JUNE 30TH, 2018	DEC 31ST, 2018
Intangible fixed assets	24 329	10 571	11 681
Tangible assets	3 134	3 681	3 353
Right-of-use assets	11 363	0	0
Other financial assets	498	653	323
Inventories	960	1 131	714
Current receivables	20 478	22 007	22 817
Cash and bank	39 704	37 044	37 945
Total assets	**100 466**	**75 087**	**76 833**
Equity	65 406	54 449	58 562
Deferred taxes	924	1 122	968
Non-current lease liabilities	6 572	0	0
Current liabilities	23 650	19 516	17 303
Current lease liabilities	3 914	0	0
Total equity and liabilities	**100 466**	**75 087**	**76 833**

Business Units / Operating Segments

From January 2018 ContextVision reports its sales, costs and results in two separate operating segments.

The Business Unit Medical Imaging comprise research, product development and OEM sales within medical imaging. The product portfolio consists of products developed for a variety of modalities, such as Ultrasound, X-ray, MRI, Mammography, CT and iRV.

The Business Unit Digital Pathology presently includes research and product development of new products for the growing digital pathology market.

	BUSINESS UNIT MEDICAL IMAGING		BUSINESS UNIT DIGITAL PATHOLOGY		GROUP TOTAL	
	6 MONTHS 2019	6 MONTHS 2018	6 MONTHS 2019	6 MONTHS 2018	6 MONTHS 2019	6 MONTHS 2018
Net sales	44.2	41.1	-	-	44.2	41.1
Operating expenses	-29.2	-31.4	-5.3	-14.0	-34.5	-44.4
Operating results	**15.0**	**9.7**	**-5.3**	**-14.0**	**9.7**	**-4.3**

Capitalization

Capitalization is recorded as intangible fixed assets only when product development meets certain requirements.

Capitalized costs totaled at 13.9 MSEK for the first six months 2019 vs 2.0 MSEK during the first six months 2018.

Costs for 2 different product development projects have been capitalized;

- Altumira: our first AI-based XR-product
- INIFY prostate 1.0: the first product within digital pathology.

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Cash flow six months 2019

	6 months 2019	6 months 2018	Full year 2018
Cash flow for the period	**1 759**	**-3 283**	**-2 382**
Liquid assets at beginning of period	37 945	40 327	40 327
Liquid assets at period end	39 704	37 044	37 945

Positive cash flow of 1.8 MSEK during the first six months.

Strong cash position of 39.7 MSEK at period end.

Summary

- Enabler to change healthcare with powerful S/W tools – origin from medical image data expertice
- Strong leadership in the medical imaging field
- About to enter the fast growing Digital Pathology market
- Solid cash position

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Thank you!