

HandyRay Glu

레이저 채혈과 혈당을 한 기기에서

새로운 개념의 혈당측정기

“ 핸디레이 글루 ”

HandyRay

핸디레이글루

Glu

No Needle | Less Pain with Laser Use | Proven Accuracy



All in one
Blood Glucose Test & Laser Lancing
혈당측정과 채혈을 하나의 기기에서

HandyRay

핸디레이글루

Glu



바늘 없는 채혈
레이저로 적은 통증 채혈
정확한 혈당 측정 결과

All in one
Blood Glucose Test & Laser Lancing
혈당측정과 채혈을 하나의 기기에서

혈당 관리 기피 요인



- 1 통증
- 2 2차 감염
- 3 굳은살 및 바늘 자국
- 4 1회 채혈양
- 5 혈당값 관리

제품 비교 : BGM *vs* CGM *vs* 핸디레이글루

구분	기존 혈당측정기 (BGM)	CGM (연속혈당측정기)	핸디레이글루
채혈 방식	바늘 채혈	피부 센서 삽입	레이저 채혈
통증	있음	삽입 시 있음	상대적으로 적음
측정 방식	필요 시 측정	24시간 연속 측정	필요 시 측정
비용	낮음	높음	중간
장비 구조	채혈기 + 측정기	센서 + 리더	올인원
데이터	제한적	연속 데이터	앱 연동
목표시장	저가, 전통시장	1형당뇨	소아, 노인, 얼리어답터

편의성/디지털화



Key Features : 핸디레이글루

CGM보다 싸고, 기존 혈당측정기보다 편하고 덜 아프다.

① Needle & Lancet-free glucose test

바늘 대신 레이저 채혈, 혈당측정기

② Next generation BGM

기존 혈당측정기의 진화, 혁신모델(CES 혁신상 수상)

③ Affordable digital healthcare

CGM보다 저렴한 스마트 관리(위케어유)

"No Needle. Just Laser"

"Needle & Lancet-free glucose testing"

"Next generation glucose monitor"

"Smart glucose monitoring without needles"

"No contamination"

"Remarkable pain reduced"

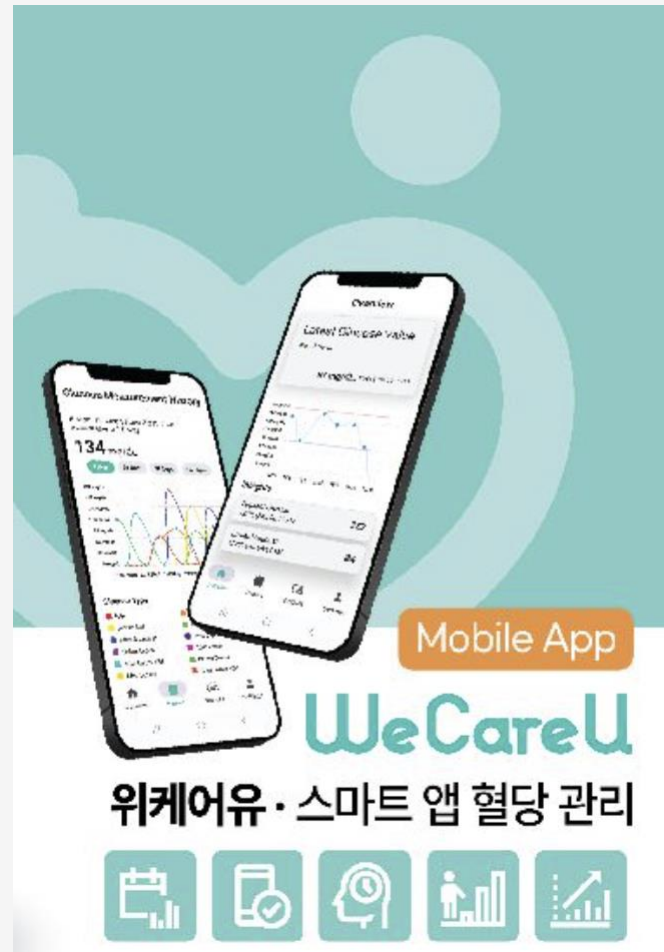
Key Features : 핸디레이글루

채혈과 혈당측정, 혈당관리를 한 기기에서 "All in One"

1st Step · 레이저 란셋 채혈



2nd Step · 혈당 측정



Reference

고객 요구 사항 - 통증

Short Communication

Technology/Devise

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Comparison of Laser and Conventional Lancing Devices for Blood Glucose Measurement Conformance and Patient Satisfaction in Diabetes Mellitus

Jung A Kim^{1,2}, Min Jeong Park¹, Eyun Song¹, Eun Roh¹, So Young Park¹, Da Young Lee¹, Jaeyoung Kim³, Ji Hee Yu¹, Ji A Seo¹, Kyung Mook Choi¹, Sei Hyun Baik¹, Hye Jin Yoo¹, Nan Hee Kim^{1,4}

당뇨병 환자의 혈당 측정 적합도 및 환자 만족도에 대한 레이저 채혈기와 기존 채혈기의 비교

Self-monitoring of capillary blood glucose is important for controlling diabetes. Recently, a laser lancing device (LMT-1000) that can collect capillary blood without skin puncture was developed. We enrolled 150 patients with type 1 or 2 diabetes mellitus. Blood sampling was performed on the same finger on each hand using the LMT-1000 or a conventional lancet. The primary outcome was correlation between glucose values using the LMT-1000 and that using a lancet. And we compared the pain and satisfaction of the procedures. The capillary blood sampling success rates with the LMT-1000 and lancet were 99.3% and 100%, respectively. There was a positive correlation ($r=0.974$, $P<0.001$) between mean blood glucose levels in the LMT-1000 (175.8 ± 63.0 mg/dL) and conventional lancet samples (172.5 ± 63.6 mg/dL). LMT-1000 reduced puncture pain by 75.0% and increased satisfaction by 80.0% compared to a lancet. We demonstrated considerable consistency in blood glucose measurements between samples from the LMT-1000 and a lancet, but improved satisfaction and clinically significant pain reduction were observed with the LMT-1000 compared to those with a lancet.

Keywords: Blood glucose, LMT-1000 reduced puncture pain by 75.0% and increased satisfaction by 80.0% compared to a lancet.

임상결과 레이저 채혈기는 채혈 통증을 75%까지 줄였고, 채혈 만족도는 80% 증가하였다.

INTRODUCTION

Self-monitoring of blood glucose (SMBG) is the primary method to reduce glycosylated hemoglobin (HbA1c) level and is useful for optimizing glycemic control and preventing diabetic complications by helping one understand their pattern of blood glucose level and facilitating lifestyle modifications [1-4]. Despite the importance of SMBG in glucose control, only 33% of

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page 1 of 5

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Comparison of pain and satisfaction between samplings with a lancet and the LMT-1000

Variable	Lancet (n=150)	LMT-1000 (n=150)			P value ^{a,b}
		Total	1st attempt	2nd attempt	
Success rate of puncture	150 (100)	149 (99.3)	118 (78.7)	31 (20.6)	
Total pain score, NRS	4.0 (3.0–6.0)	1.0 (0–2.0) ^a	1.0 (0–2.0)	1.0 (0–1.0) ^b	<0.001
Total satisfaction score, VAS	5.0 (3.0–7.0)	9.0 (7.0–10.0) ^a	9.0 (7.0–10.0)	8.0 (5.5–10.0) ^b	<0.001

Values are presented as number (%) or median (interquartile range).

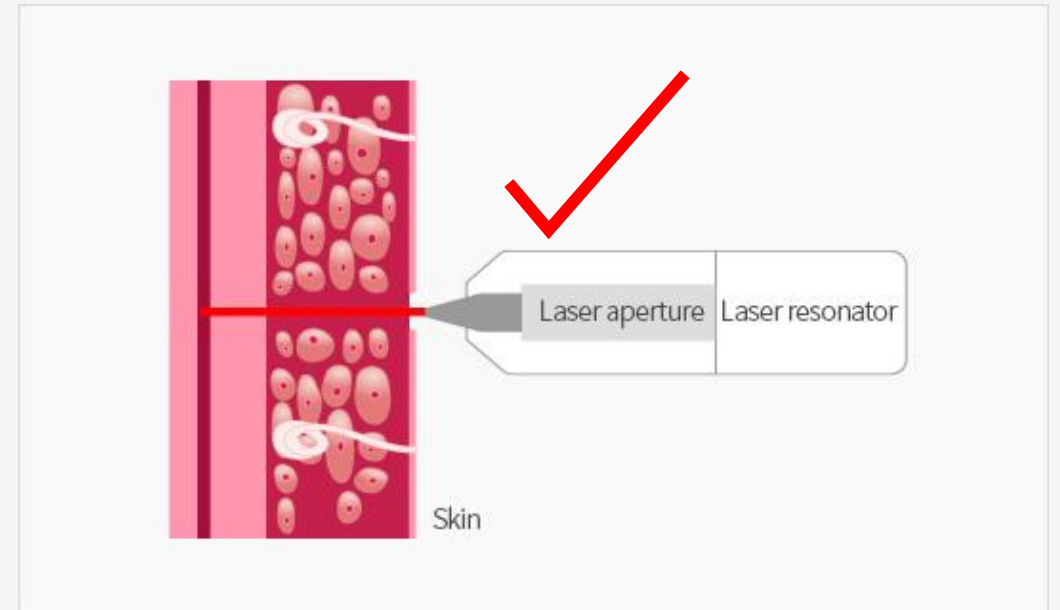
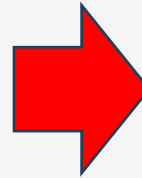
NRS, numeric rating scale; VAS, visual analog scale.

^a P value between lancet and total LMT-1000,

^b P value between lancet and 2nd attempt with LMT-1000.

고객 요구 사항 - 2차 감염

There is a risk of infection because it directly pierces the skin.



The risk of infection is minimized by **HandyRay** use because it does not directly pierce the skin.

고객 요구 사항 - 상처

Needle Lancet Use



VS

HandyRay Glu Use

