# Micromedex product detailing

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KIMS Co.,Ltd. Ken Kwon +82-2-3019-9335 kukwon@kims.co.kr





- 1. What is "Micromedex"?
- 2. Why is "Micromedex"?
- 3. Micromedex Tools
- 4. Micromedex Search Skill
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- 6. Mobile Micromedex
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# 1. What is "Micromedex"?



## **Introducing Micromedex**



# MICROMEDEX

### evidence-based clinical reference

- Clinical decision support tool
- Drug information database

## **Introducing Micromedex**



- MICROMEDEX®는 의약,질병,환경,독성 등 임상 현장에서 필요로 하는 모든 정보로 구성된 전문 임상의약학 Database로써 전세계 92개국, 국내 약 80여 곳의 병원, 제약회사, R&D 센터, 정부기관, 산업현장에서 이용 중이며 특히 병원의 경우, 국내 대형 병원에서 대부분 MICROMEDEX®를 이용하고 있는 대표적인 전문임상약학Database 입니다.
- 전문가들에 의해 철저하게 검증된 의약품 모노그래프와 상담자료로써 전 세계 처방 및 비처방(OTC)의약품의 용법/용량, 약물동력학, 주의사항 (부작용, 금기, 임부/수유부 안전성 등), 상호작용 (약물- 약물, 음식, 질병, 담배/술 등), 임상적용, 비교유효성 등의 정보를 제공하고 있습니다.
- 1977년 미국의회로부터 Official Drug Compendium 로 인정받았습니다.
- Micromedex editorial process는 NICE 인증을 받았습니다.

## **Micromedex Product**



#### **MICROMEDEX** Product Information

제품군	제품명	설명
	DRUGDEX	전문가들에 의해 철저하게 검증된 의약품 모노그래프와 상담자료로써 전 세계 처방 및 비처방 (OTC)의약품의 용법/용량, 약물동력학, 주의사항 (부작용, 금기, 임부/수유부 안전성 등), 상호 작용 (약물- 약물, 음식, 질병, 담배/술 등), 임상적용, 비교유효성 등의 정보를 제공 1,900여성분, 150,000제품정보 수록하고 있으며 모노그래프 분량은 20~350 page 1977년 미국의회로부터 Official Drug Compendium 로 인정
	Complete DRUG Interactions	
	Complete IV Compatibility	약물과 용제 정보 (600여종), Y사이트 위치, 혼합 및 안정성, 농도정보 등의 주사제 배합정보 제 공
의약품 정보	MARTINDALE	미국, 영국 및 전 세계적으로 사용되는 의약품의 일반명 및 제품명, 동의어 및 화학명, 분자식, 분자량, CAS number, 물리적 특성, 사용금기 및 사용상 주의, 상호작용, 약물동력학, 약리학을 비롯한 용법/용량 정보 등 70,000여 제품 5,000여 성분에 대한 정보 제공
Drug Knowledge	AltMedDex	전문인용 민간요법 상세정보 Database로서 대체약 및 보조식품에 대한 증거중심의 (evidence- based) 신뢰성 있는 정보
	AltMedDex Protocols	질병별 민간요법, 식이요법, 건강보조식품 정보를 통합하여 제공하는 전문인용 대체요법 질병 치료 프로토콜
	Neofax	신생아 의약품 정보

## **Micromedex Product**



제품군	제품명	설명
	DISEASEDEX General Medicine	일반질병의 임상정보, 검사정보, 증상 및 감별진단, 치료 등의 상세 정보로써 입원/외래 환자 진료시의 의학적인 증거를 제시하고, 최선의 진단, 치료 방법을 제공.
질환정보 Disease Management	DISEASEDEX Emergency Medicine	응급시 질병 별 임상정보, 검사정보, 증상 및 감별진단, 치료 등의 상세 정보로써 진단과 치료 방법에 대해 응급의학 임상의 들이 기술.
	Lab Advisor	적합한 시험검사를 확인하고 해석하기 위한 정보. 검사결과에 영향을 미치는 약물 정보 등.
	POISINDEX	1,000 treatment protocols 이 수록된 세계 최고의 독성관리 참고서로써 1백만여종 이상의 가 정용품, 의약품, 산업 및 환경, 생물학적 물질등의 독성정보 제공. 치료 protocols, 중독증상 및 임상증상, 독성범위 (Range of toxicity) 등 정보 제공. US 의회에 서 Official Poison Compendium 으로 인증
독성정보 Toxicology Knowledge	REPRORISK	세계최고의 정확하고 상세한 의약품, 화학물질, 화재, 소음 및 환경으로 인한 생식계 위험도 정 보, 4개의 DB로 구성 - TERIS (University of Washington): 분류등급에 따른 의약품 및 환경물질의 최기형성도 (embryo malformation) - REPROTEXT (Micromedex): 화학물질, 열, 방사선조사 및 소음에 의한 Reproductive, carcinogenic & genetic effects - REPROTOX (Reproductive Toxicology Center): 방사선조사, 식품첨가물, 기타 의약품 등의 수태능력, 남성의 생식능력, 수유등에 미치는 독성정보 - Shepard's Catalog of Teratogenic agents (Dr. T Shepard): 식품첨가물, 가정용품, 환경오 염물질 및 바이러스 등에 의한 생식독성정보
TOMES Plus		HAZARDTEXT, INFOTEXT, MEDITEXT. 산업 및 작업환경에서 화학제품 취급/처리시 정보. 노출, 유출, 폭발 등의 정보.
	CareNotes	전 세계 15개국 언어로 번역되어 있는 약물복용, 질병, 검사정보 등에 관련된 환자용 교육 자 료.
환자교육자료 Patient Education	AltCareDex	자가요법, 한약(허브) 및 식이요법/건강보조식품에 대한 정보를 요약하여, 환자 상담시에 활용 하도록 함. 케어노트 형식의 환자 교육 자료
	Consumer Health Solution	환자와 일반인에게 제공하는 다양한 건강정보와 질병정보로 이루어져 있으며 멀티미디어나 애니메이션을 활용하여 환자에게 보다 쉽게 정보제공이 가능, 맞춤형 솔루션 제작 가능



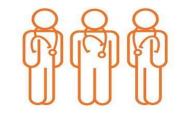


### **Evidence-based editorial content** has been thoroughly reviewed by our experts

90+ editorial staff members(full days)7,000+ journals researched500,000+ articles reviewed annually

## **Editorial Process**









TRIAGE AND REVIEW BY SENIOR CLINICIANS

APPLY LITERATURE INCLUSION/EXCLUSION CRITERIA

SENIOR CLINICIANS SELECT LITERATURE FOR CONTENT

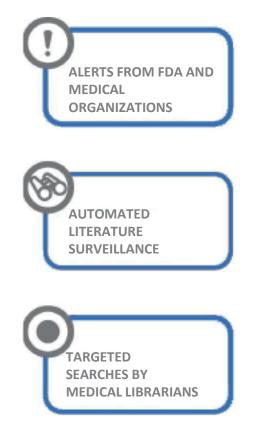
### **Literature Evaluation**

- Rigorous Literature Evaluation Policy
  - Evaluation of the quality of the study so that only the best evidence is incorporated into Micromedex content
  - Determination of clinical significance of the study drives update prioritization
- Conflict of Interest Policy to protect against outside influence

#### We include the <u>best</u> of the available medical literature in our content

## **Editorial Process**





### Literature Surveillance

Our Knowledge Development staff monitor the worlds medical literature every day

- Estimated over 12,000 medical articles published per week
  - On-going literature surveillance
    - Primary literature
    - Regulatory bodies
    - Guideline organizations
  - Targeted Searches
    - Specific topics
    - Clinical specialty
- Frequency of surveillance is driven by the topic
- Significant annual investment in library resources

Identification of the **<u>full body of evidence</u>** on a topic is essential to provide fully informed recommendations

## **Editorial Process**





### **Official Accreditation**

- The National Institute of Health and Care Excellence (NICE) has accredited the process used by IBM Watson Health to develop content used in its MICROMEDEX Solutions.
- For full details on our accreditation visit: <u>www.nice.org.uk/accreditation</u>

# 2. Why is "Micromedex"?



# 폭넓은 정보 제공



Drug Home Interactions	IV Compatibility	Drug ID	Drug Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼
Rivaroxaban Drug Classes: Anticoagulant   Bloc Routes: Oral Quick Answers In-E	od Modifier Agent   A	All All Resu	ts			
Related Results Alternative Medicine Disease Toxicology	RIVARO	aban	ivaroxaban" ence-based informa	ation		
Consumer Drug Information Drug Consults eMC SmPC (UK) Index Nominum IT- Dialogo Sui Farmaci Martindale PDR® Product Lookup - Martindale Product Lookup - RED Book Online Product Lookup - Tox & Drug	XAREL Farr XAREL Farr XAREL Farr XAREL Farr XAREL	g: Summary top TO 5 cpr riv 10 naco: Sintesi di TO 10 cpr riv naco: Sintesi di TO 30 cpr riv naco: Sintesi di TO 100 cpr riv naco: Sintesi di TO 42 cpr riv	) mg Ille Informazioni de 10 mg Ille Informazioni de 10 mg Ille Informazioni de 10 mg Ille Informazioni de	l Prodotto <i>(Dialogo s</i> l Prodotto <i>(Dialogo s</i> l Prodotto <i>(Dialogo s</i> l Prodotto <i>(Dialogo s</i> l Prodotto <i>(Dialogo s</i>	ui Farmaci) ui Farmaci) ui Farmaci)	
Filter by All (376) Drug (355) Disease (14) Toxicology (2) Alternative Medicine (3) Reproductive Risk (2)	XAREL Fan Xarelto Dru Xarelto	TO 28 cpr riv 2 naco: Sintesi di 15mg film-coa g: Summary of I 20mg film-coa g: Summary of I	20 mg elle Informazioni de ted tablets Product Characteris ted tablets Product Characteris	l Prodotto <i>(Dialogo s</i> stics (e <i>MC</i> )		





### Drugdex® 컨텐츠 정보

- · 약물,약품 의약품 약동학 및 약품 정보
- · 약물비교 정보
- · 약물상호 작용
- · 약품식별 정보
- · 부작용,금기,임부 안전성 정보
- ・ 주사제 배합 정보
- ・TPN, TNA 정보
- · 신생아 의약품 정보
- · FDA 승인약품 상세 정보
- Non-FDA 약품 임상 정보
- 독성 정보
- 생식독성 정보
- 질병,질환 임상 정보
- · 화학제품 취급/처리 정보
- · 환자교육 정보

# 2 Martindale



- 전세계적으로 공신력 있게 사용되고 있는 Martindale DB 제공
- Martindale은 치료약물, 임상시험약물, 약용식물, 진단시약, 살충제, 염색약, 방부제, 유해물질에 대한 정보를 포괄

Drug Home Interactions	V Compatibility Drug ID Comparison CareNotes	® NeoFax® / Pediatrics Other Tools ▼		
Rivaroxaban Drug Classes: Anticoagulant   Bloo Routes: Oral Quick Answers In-D	d Modifier Agent   All epth Answers All Results			
Dosing/Administration Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Dose Adjustments Administration Comparative Efficacy Place In Therapy Medication Safety Contraindications Precautions	Toxicology Treatment RIVAROXABAN AND RELATED AGENTS • Support: MILD TO MODERATE TOXICITY: Treatment symptomatic and supportive. Transfusion of packed red • Decontamination: PREHOSPITAL: Consider activated of HOSPITAL: Consider activated charcoal after a recent • Airway management: Assess airway; endotracheal intul • Antidote: None. • Monitoring of patient: Monitor for evidence of bleeding ( suspected bleeding. Monitor CBC with platelet count, vi	I cells and fresh	f the airway is protected. tysis or upper GI bleeding. noglobin and hematocrit in patients with and aPTT are relatively insensitive in measuring	Related Results Alternative Medicine Disease Toxicology Consumer Drug Information Drug Consults eMC SmPC (UK) Index Nominum TT- Dialogo St i Farmaci Martindale PDR® Product Lookup - Martindale Product Lookup - RED Book Online Product Lookup - Tox & Drug
Adverse Effects Black Box Warning REMS Drug Interactions (single) IV Compatibility (single)	<ul> <li>Enhanced elimination procedure: Rivaroxaban is highly</li> <li>Patient disposition: HOME MANAGEMENT: Patients th Intentional overdoses and patients with bleeding compli- bleeding is controlled. ADMISSION CRITERIA: Patients</li> </ul>	protein bound and dialysis is not expected to adequately to be useful after ov at unintentionally ingest one or two doses of oral rivaroxaban may be observe ications should be referred to a healthcare facility. Patients with minor bleeding with more than minor bleeding complications should be admitted for serial he ematology should be consulted for anticoagulation guidance. A toxicologist or	ed at home. OBSERVATION CRITERIA: g complications can be observed until the emoglobin and hematocrit monitoring. CONSULT	





- PDR은 미국 FDA 승인된 2,800종 이상의 의약품의 허가정보를 수록
- PDR, 일반의약품 및 영양보충제 PDR, 안과 약물 PDR 수록

Drug Home Interactions	IV Compatibility Drug ID Comparison CareNotes® NeoFax® / Pediatrics Other Tools ▼	
Rivaroxaban Drug Classes: Anticoagulant   Bloo Routes: Oral Quick Answers In-D	d Modifier Agent   All epth Answers All Results	
Dosing/Administration Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Dose Adjustments Administration Comparative Efficacy Place In Therapy	Toxicology Treatment       *         RIVAROXABAN AND RELATED AGENTS       • Xarelto         • Support: MILD TO MODERATE TOXICITY: Treatment is symptomatic a symptomatic and supportive. Transfusion of packed red cells and fresh       • Print       Close         • Decontamination: PREHOSPITAL: Consider activated charcoal after a recent potentially toxic ingestion and if the patient is able to maintain their airway or if the airway is protected. HOSPITAL: Consider activated charcoal after a recent potentially toxic ingestion and if the patient is able to maintain their airway or if the airway is protected.         • Airway management: Assess airway; endotracheal intubation may be required in patients with intracranial bleeding or severe hemoptysis or upper Gl bleeding.         • Antidote: None.	Related Results Alternative Medicine Disease Toxicology Consumer Drug Information Drug Consults eMC SmPC (UK) Index Nominum IT- Dialogo Sui Farmaci Manundate
Medication Safety Contraindications Precautions Adverse Effects Black Box Warning DEMS	<ul> <li>Monitoring of patient: Monitor for evidence of bleeding (eg, venous access sites, urinary, gastrointestinal, vaginal). Monitor serial hemoglobin and hematocrit in patients with suspected bleeding. Monitor CBC with platelet count, vital signs, and liver enzymes in symptomatic patients. Prothrombin time (PT) and aPTT are relatively insensitive in measuring the activity of rivaroxaban at therapeutic doses, but may be prolonged after overdose. Plasma anti-factor Xa concentrations can be measured, but results are generally not available rapidly enough to use this to guide therapy.</li> <li>Enhanced elimination procedure: Rivaroxaban is highly protein bound and dialysis is not expected to adequately to be useful after overdose.</li> <li>Patient disposition: HOME MANAGEMENT: Patients that unintentionally ingest one or two doses of oral rivaroxaban may be observed at home. OBSERVATION CRITERIA: intentional overdoses and natients with bleerding complications can be observed until the</li> </ul>	PDR® Product Lookup - Martindale Product Lookup - RED Book Online Product Lookup - Tox & Drug

## **④ Drug Consults**



- Micromedex Editorial Team에서 자체 제작한 질병, 약물 등에 대한 다양한 주제를 다룬 자료 제공
- 임상 가이드라인, 비교 테이블을 포함

	ACE	ACE INHIBITOR-INDUCED COUGH						
	약물 자동	2 (J			*:			
	RES	PONSE						
Drug Drug		INCIDENCE • Frequent (incidence 1)	% or greater)					
Home Interactions IV Compatibility Drug ID Comparison	n C	The incidence	of ACE inhibitor-induced co		0.7% to 48%, in a review of literature from the 1980s [1]. Later postmarketing surveys reported an incidence rate of between 0% to 12%, while specifically designed % within the general population [2]3]4[1]5]. A prospective study of 100 Nigerians revealed a 27% incidence, with a 3.1 female-preponderance [6]. During trials with quin			
		among nearly (	6000 patients, spontaneous	reporting of cough occurred	With the general population (p)			
Drug Consults		representative	o compandario rangoo or mo	across of cough and matural	man navo in panamo minora rogara to oposino nigri nav navoro incesato.			
orag consults	Drug Benaz	Incidence epril 1.2%	Withdrawal	Reference 1	-			
JumpTo: 🖪 BCDEFGHIJKLMNOPQR	S T Captor	oril 0.5-2% oril 0.5-2%		24 24				
	Cilaza Delapr	il 12.3%	4%	22				
Displaying 45 of 465 "Drug Consults"	Enalar Fosino Lisinor	pril 2-10%	10%	23 3-4 5-6				
	Moexin	oril 6%	1%	7-8 9-10				
Abbreviations	Quinap	oril 1-4%	4%	11-13	-			
	Spirap Trando	ril 0.9-4%	0.1%	16-18, 21 19-20				
ABVD - USED FOR HODGKIN'S DISEASE								
ACE	INHIBITOR-IN	IDUCED COUGI	н					
AC - USED FOR BREAST CANCER 약물 제	₹ <b>(</b> )							
	CLINICAL MANAGEN							
	PROPHYLAC     A caref		av prevent unnecessary	interruption of ACF inhibi	vitor treatment and should include consideration of the following: postnasal drip, asthma, upper respiratory tract infection, heart failure, gastroesoph			
AC - USED FOR MULTIPLE MYELOMA	and sm	oking [10].	.,,,					
	PHARMACOL     A 4-day		E inhibitor and/or substi	itution of another class of	f antihypertensive is considered the most effective and least expensive method of determining whether cough is indeed drug-induced and proceedi			
AC FOLLOWED BY T WITH TRASTUZUMAB - USED FOR BREAST CANCER	treatme	ent if it is.						
		84 elderly patients with co	ugh induced by previou	s ACE inhibitor therapy ar	e with enalapril led to recurrence in approximately 44%, while treatment with eprosartan led to cough in 20%, a rate similar to those treated with pla md confirmed during rechallenge with lisinopril 10 mg daily, double-blind challenge with either losartan 50 mg daily or metolazone 1 mg daily result nn cough develop 2 weeks after losartan was substituted for lisinopril [27].			
ACE INHIBITOR-INDUCED ACUTE RENAL FAILURE				-	crossreactivity is likely to occur.			
		<ul> <li>Eight of 24 patients who received fosinopril as an alternative to other ACE inhibitor therapy cleared completely [14][13], while another 24 patients who were switched to fosinopril after developing cough on other ACE inhibitors i subjective improvement in such cough characteristics as frequency, severity, effects on sleep, and mucus production [15].</li> </ul>						
ACE INHIBITOR-INDUCED ANGIOEDEMA		supporter importantian in such cognitation can an englishing, serving, serving, serving, encodina production (15) - Daily supplementation with 50 mg elementation (serving) and encoded subjective couply within 4 weeks in 6 of 10 patients, completely resolving cough in 3 [28].						
		sive therapy is generally in		5				
	enthusi	<ul> <li>Sulindac 100 mg orally twice daily and diclofenac have also been effective in treating cough secondary to ACE inhibitors in limited studies [16]. However, NSAIDs may interfere with the hypotensive action of ACE inhibitors and canno enthusiastically recommended [29].</li> </ul>						
ACE INHIBITOR-INDUCED COUGH	due to	loss of the swallowing refle	ex (for 4 hours) and the	possibility of bronchospas				
		yn sodium inhalation was gh, wheezing, bronchospa			patients, with improvement in another 2; dose and duration of therapy were unspecified [30]. However, since cromolyn may also induce similar ad-			
	inotropi	eophylline and nifedipine a ic effects which would preo ug interactions into an exis	clude its use in patients	with heart failure. As with	plored for potential benefit in treating ACE inhibitor-associated cough, but either have no proven efficacy or, in the case of nifedipine, have potential all other suggested alternatives, the value of adding yet another drug which carries either its own unique adverse effects or the potential for induci			
	NON-PHARMACOLOGIC							

# 처방 가이드라인 제공



ions

• 전 세계에서 발표된 다양한 처방 기준도 포함하여 제공

Home	Drug Interactions	IV Compatibility	Drug ID	Drug Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼
BEERS	CRITERIA	A SUMMARY	OF POTE	ENTIALLY IN	IAPPROPRI	ATE MEDICATIO	N US
약물 자문 🗜							▲ 페이
RESPO	ISE						

In 1991, Dr. Mark Beers and colleagues published criteria developed by consensus and literature methodology identifying inappropriate medication use among institutionalized elderly patients. Since 1991, these criteria have been updated and revised and present the Beers criteria (Beers List) is one of the most widely cited criteria for inappropriate medication use in older adults aged 65 years or greater [1][2][3].

Inappropriate medication use refers to the use experts in geriatric care and the American Geri are either ineffective, or they pose an unneces recommendation, the quality of supporting evid and quality of evidence ratings:

Strength of recommendation	Description
Strong	Benefits clearly o benefits)
Weak	Benefits finely ba
Insufficient	Not enough data

Quality of evidence	Description

Evidence from large well-conduc

Reference

h ea 1. Beers MH, Ouslander JG, Rollingher I, et al: Explicit criteria for determining inappropriate medication use in nursing home residents. UCLA Division of Geriatric Medicine. Arch Intern Med 19 PubMed Abstract: http://www.ncbi.nlm.nih.gov/... PubMed Article: http://www.ncbi.nlm.nih.gov/...

2 Beers MH<sup>-</sup> Explicit criteria for determining potentially inappropriate me

2. Beers MH: Explicit criteria for determining potentially inappropriate medication use by the elderly. An update. Arch Intern Med 1997; 157(14):1531-1536. PubMed Abstract: http://www.ncbi.nlm.nih.gov/... PubMed Article: http://www.ncbi.nlm.nih.gov/...

3. Fick DM, Cooper JW, Wade WE, et al: Updating the Beers criteria for potentially inappropriate medication use in older adults: results of a US consensus panel of experts. Arch Intern Med 20 PubMed Abstract: http://www.ncbi.nlm.nih.gov/... PubMed Article: http://www.ncbi.nlm.nih.gov/...

4. American Geriatrics Society 2012 Beers Criteria Update Expert Panel: American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. J Am PubMed Abstract: http://www.ncbi.nlm.nih.gov/... PubMed Article: http://www.ncbi.nlm.nih.gov/...

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Jano E & Aparasu RR : Healthcare outcomes associated with beers' criteria: a systematic review. Ann Pharmacother 2007; 41(3):438-447.
 PubMed Abstract: http://www.ncbi.nlm.nih.gov/...
 PubMed Article: http://www.ncbi.nlm.nih.gov/...

Last Modified: July 01, 2014





- 적응증에 관한 정보는 FDA 승인 적응증(FDA Uses)과 FDA 미승인 적응증(Non-FDA Uses)으로 분류하여 제공
- 적응증에 관한 정보를 요약정보와 상세정보로 나누어 제공
- 추천 등급(Class I/II/III)와 문헌 보고도(Category A/B/C) 제공

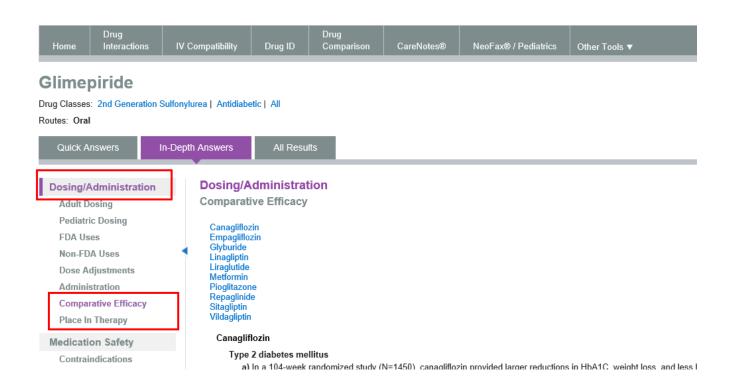
#### Rivaroxaban

Quick Answers         In-Depth Answers         All Results	Rivaroxaban	×
Dosing/Administration         Adult Dosing         Pediatric Dosing         FDA Uses         Non-FDA Uses         See 'In-Depth Answers' for detailed results.         FDA Uses         Non-FDA Uses         Dose Adjustments         Administration         Comparative Efficacy         Place In Therapy	Acute coronary syndrome, Recent - Cardiovascular event risk; Prophylaxis FDA Approval: • Adult, no • Pediatric, no Efficacy: • Adult, Evidence favors efficacy Strength of Recommendation:	^
Medication Safety	Adult, Class IIb	
Contraindications Precautions Adverse Effects	Strength of Evidence: <ul> <li>Adult, Category B</li> </ul>	~
Black Rox Warning	인쇄 닫기	

# 약물 효능/효과 비교 정보



- Comparative Efficacy: 특정 적응증에 대한 약물 비교 자료 제공
- Place In Therapy: 해당 성분의 약물이 치료 과정에 있어 어떤 위치를 차지하고 있는 지 분석한 자료 제공, Drug Consult 자료로 연결



#### Glimepiride

#### Drug Classes: 2nd Generation Sulfonylurea | Antidiabetic | All

#### Routes: Oral

Quick Answers     Depth Answers     All Results       Desing/Administration Adult Dosing FDA Uses Nor FDA Uses Nor FD	Routes: Oral		
Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Advise Adjustments Administration Comparative Efficacy Medication Safety Contraindications Precaut	Quick Answers In-Depth	Answers All Results	
a) in a 104-week randomized study (N=1450), canagilifozin provided larger reductions in HbA1C, weight loss, and less hypoglycemia compared with glimepride. The mean HbA1C reductions in HbA1C reductions in HbA1C, weight loss, and less hypoglycemia compared with glimepride (-0.55%), while the reduction with canagilifozin groups, and HbA1C reduction for mbaseline (baseline mean, 7.8%) at 104 weeks with canagilifozin 300 mg (-0.74%) was significantly larger compared with glimepride (-0.55%), while the reduction with canagilifozin groups, and reduction with redu	Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Dose Adjustments Administration Comparative Efficacy Place In Therapy Medication Safety	Comparative Efficacy Canagliflozin Empagliflozin Glyburide Linagliptin Liraglutide Metformin Pioglitazone Repaglinide Sitagliptin Vildagliptin	-
Bin       Clinepiride         Dug Classes: 2nd Generation Sulfonylurea   Antidiabetic   All         Routes: Oral         Quick Answers       In-Depth Answers         All Results         Dosing/Administration         Adult Dosing         Pediatric Dosing         FDA Uses         Non-FDA Uses         Dose Adjustments         Administration         Dose Adjustments         Administration         Dose Adjustments         Administration         Dose Adjustments         Administration         Dose dijustments         Administration         Dose dijustments         Administration         Orewer display         Ose dijustments         Administration         Ommerative Ffficery            Onmerative Ffficery            All Results            Print            Pine are no specific contraindications and if tolerated, is recommended as the optimal first-line (rug for treatment of type 2 diabetes reflective of individual patient preferences, needs, and values is recommended over algorithmic approaches of past guidelines, Metformin therapy, in patients on the past of to better therapy. Submonylemates and patient-specific propeties such as deministered	Precautions	HbA1C reduction from b reduction with canagliflo	seline (baseline mean, 7.8%) at 104 weeks with canagliflozin 300 mg (-0.74%) was significantly larger compared with glimepiride (-0.55%), while the in 100 mg (-0.65%) was similar to glimepiride. The lowest HbA1C values were reported after 52 weeks of treatment in the canagliflozin groups, and
Adult Dosing       Place In Therapy         Pediatric Dosing       Podiatric Dosing         FDA Uses       A) Glimepiride is a sulfonylurea antidiabetic agent indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus [50].         Non-FDA Uses       A) Glimepiride is a sulfonylurea antidiabetic agent indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus [50].         B) In a position statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD), a less prescriptive, patient-centered approach to the treatment of type 2 diabetes reflective of individual patient preferences, needs, and values is recommended over algorithmic approaches of past guidelines. Metformin thera is limited data to recommend a specific contraindications and if tolerated, is recommended as the optimal first-line drug for treatment of type 2 diabetes mellitus. Following initiation of drug therapy. Sulfonylureas may be used as initial treatment in cases where metformin cannot be used, and they may be administered as a component of combination therapy in patients unable to achieve HbA1c goals with lifestyle interventions and metformin monotherapy [3]. As with other antidiabetic drugs, no clinical studies have	RE Drug Classes: 2nd Generation S Routes: Oral	Sulfonylurea   Antidiabetic   All	
Place In Therapy       established conclusive evidence of macrovascular risk reduction with glimepiride [50].         See Drug Consult reference: DIABETES MELLITUS: GUIDELINES FOR DRUG THERAPY         Medication Safety	Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Dose Adjustments Administration Comparative Efficacy Place In Therapy	A) Glimepiride is a sulfon B) In a position statement to the treatment of type 2 there are no specific cont limited data to recomment benefits may be used to g combination therapy in particular to the stabilished conclusive events.	Lurea antidiabetic agent indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus [50]. of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD), a less prescriptive, patient-centered approach liabetes reflective of individual patient preferences, needs, and values is recommended over algorithmic approaches of past guidelines. Metformin therapy, if andications and if tolerated, is recommended as the optimal first-line drug for treatment of type 2 diabetes mellitus. Following initiation of metformin, there is a specific strategy for implementation of drug therapy, so agent- and patient-specific properties such as dosing frequency, side-effect profiles, cost, and other ide therapy. Sulfonylureas may be used as initial treatment in cases where metformin cannot be used, and they may be administered as a component of ients unable to achieve HbA1c goals with lifestyle interventions and metformin monotherapy [3]. As with other antidiabetic drugs, no clinical studies have dence of macrovascular risk reduction with glimepiride [50].

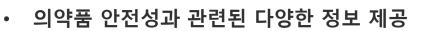
# 환자별 약물 용량 정보



- 성인 용량(Adult Dosing): 용법/용량 안에 기본적으로 성인 용량 정보 제공
- 소아 용량(Pediatric Dosing): 성인 용량과 구분하여 개별적 제공
- 특수 환자에 대한 용량 조절 정보(Dose Adjustments): 간장애, 신장애, 노인 용량 조절 주의가 필요한 특수 환자의 용량 조절 정보 제공

Drug Home Interactions IV	Compatibility Drug IE	Drug Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼
Rivaroxaban Drug Classes: Anticoagulant   Blood Routes: Oral Quick Answers In-Dep		esults			
Dosing/Administration Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Dose Adjustments Administration Comparative Efficacy Place In Therapy Medication Safety Contraindications Precautions Adverse Effects Black Box Warning REMS	<ul> <li>renal impairment in n</li> <li>renal impairment in n</li> <li>renal impairment in p</li> <li>renal impairment, acu</li> <li>renal impairment, acu</li> <li>renal impairment, cro dronedarone, erythron</li> </ul>	for detailed results. onvalvular atrial fibrillatio onvalvular atrial fibrillatio ostoperative prophylaxis te renal failure: Discont Cl 15 to 80 mL/min: Avoi mycin, verapamil) unles noderate or severe (Chil	on, CrCl 15 to 50 ml on, CrCl less than 15 of DVT and treatm inuation recommend d concomitant use v s benefit outweighs	/min: 15 mg ORALLY once of 5 mL/min: Avoid use [5] ent and prevention of recurre ded [5] with drugs that are both P-gly potential bleeding risk [7].	Print Y once daily with the evening meal [5] daily with the evening meal [5] Int DVT/pulmonary embolism, CrCl less than 30 mL/min: Avoid use [2] coprotein inhibitors and moderate CYP3A4 inhibitors (eg, abiraterone acetate, diltiazem, d with coagulopathy: Avoid use [5]

# 의약품 안전성 정보 제공



Drug     Drug       Home     IN Compatibility       Drug ID     Comparison       CareNotes®     NeoFax® / Pediatrics       Other Tools ▼		
Routes: Oral	•	금기
Quick Answers In-Depth Answers All Results	•	
	•	경고
Dosing/Administration Medication Safety		0 <u>—</u>
Adult Dosing Black Box Warning		нтю
Pediatric Dosing See 'In-Depth Answers' for detailed results.	•	부작용
FDA Uses Oral (Tablet)		
Non-FDA Uses <ul> <li>Premature discontinuation of any oral anticoagulant, including rivaroxaban, increases the risk of thrombotic events. To reduce this risk, c</li> </ul>	•	BBW
Dose Adjustments anticoagulant if rivaroxaban is discontinued for a reason other than pathological bleeding or completion of a course of therapy. Epidural (		
Administration long-term or permanent paralysis, have occurred in patients treated with rivaroxaban who are receiving neuraxial anesthesia or undergoi between the administration of rivaroxaban and neuraxial procedures is not known. Factors that can increase the risk of developing these		DEMC
epidural catheters; concomitant use of drugs affecting hemostasis, such as NSAIDs, platelet inhibitors, or other anticoagulants; or history	•	REMS
Place In Therapy spinal puncture, spinal deformity, or spinal surgery. Monitor patients frequently for neurological impairment. If neurological compromise is Consider risks/benefits before neuraxial intervention in patients anticoagulated or to be anticoagulated for thromboprophylaxis [11].		
Medication Safety	•	약물 상호작용
Contraindications		
Precautions	•	IV compatibility
Adverse Effects	•	
Black Box Warning REMS		
Drug Interactions (single)	•	임부&수유부 주의 정보
IV Compatibility (single)		
Pregnancy & Lactation	•	모니터링
Monitoring		_ 1 10
Do Not Confuse		

**KIMS** 





- 약물명, 질병명, 증상명, 검사명 등 다양한 키워드로 검색 가능
- 약물명 검색 시, 단일/복합제가 모두 검색되고 투여경로 및 제형별로 구분되는 정보 제공

Keyword Search         Hot Lists         Care and Condition Titles         Drug Titles         Lab Titles         Conversion Calculator
Search     Image: Select Titles     Image: Select Documents     Image: Select
Your Search: aspirin
Go To: i Care and Condition Titles (1 titles) i Drug Titles (21 titles) i Lab Titles (0 titles)
Care and Condition Titles: (1 filles)
NONPRESCRIPTION MEDICATION OVERDOSE IN CHILDREN (ASPIRIN POISONING) Q Drug Titles: (21 titles)
Acetaminophen/Aspirin/Caffeine/Salicylamide (Oral) (Tablet)
Acetaminophen (Oral) (Capsule, Capsule, Liquid Filled, Liquid, Powder, Tablet, Tablet, Chewable, Tablet, Disintegrating, Tablet, Effervescent, Tablet, Exte
Acetaminophen (Rectal) (Suppository) (NON-ASPIRIN CHILDRENS)
Analgesic/Decongestant (Oral) (Tablet, Packet, Tablet, Chewable, Tablet, Effervescent, Tablet, Capsule, Capsule, Liquid Filled, Liquid, Powder) (NON-ASPIRIN S
Antihistamine/Acetaminophen (Oral) (Capsule, Tablet, Packet, Liquid) (NON-ASPIRIN PM EXTRA STRENGTH)
Aspirin/Caffeine/Dihydrocodeine (Oral) (Capsule)
Aspirin/Caffeine (Oral) (Tablet, Powder, Tablet, Effervescent)
Aspirin/Citric Acid/Sodium Bicarbonate (Oral) (Tablet, Effervescent, Tablet)
Aspirin/Codeine (Oral) (Tablet) 🛱
Aspirin/Dipyridamole (Oral) (Capsule, Capsule, Extended Release)
Aspirin (Oral) (Tablet, Tablet, Chewable, Tablet, Enteric Coated, Tablet, Effervescent, Tablet, Delayed Release, Capsule, Delayed Release, Gum) 🛱
Aspirin (Rectal) (Suppository) 🛱
Assiste Combination (Cont) (Tablet Tablet Effectioned Liquid Darlet)

- 질병명 검색 시, 검색 키워드와 관련된 모든 질병, 증상, 생활습관 개선 사항, 약제 사용법 등의 정보 도출
- 문서 종류를 일반적 복약정보, 입원환자용, 퇴원환자용, ER환자용으로 나누어 제공

#### Your Search: asthma

Go To: i Care and Condition Titles (19 titles) i Drug Titles (1 titles) i Lab Titles (0 titles)

Care and Condition Titles: (19 titles)		
<ul> <li>ALLERGIES (ALLERGIC ASTHMA) &amp;</li> <li>ALLERGIES, AMBULATORY CARE (ALLERGIC ASTHMA) &amp;</li> <li>ASTHMA (ASTHMATIC) &amp;</li> <li>ASTHMA, AMBULATORY CARE (ASTHMATIC) &amp;</li> <li>ASTHMA IN CHILDREN (ASTHMATIC) &amp;</li> <li>ASTHMA IN CHILDREN, AMBULATORY CARE (ASTHMATIC) &amp;</li> </ul>		
	ALL	ALL
CHRONIC OBSTRUCTIVE PULMONARY DISEASE (ASTHMATIC BRONCHITIS, C	·	
COPD, AMBULATORY CARE (ASTHMATIC BRONCHITIS, CHRONIC) COPD EXACERBATION, AMBULATORY CARE (ASTHMATIC BRONCHITIS, CHRONI	General Information	Languages English Spanish
EXERCISE-INDUCED ASTHMA &     EXERCISE-INDUCED ASTHMA, AMBULATORY CARE &	Inpatient Care	English Spanish
		English Spanish Arabic Chinese (Simpli Chinese (Tradit French (Canadia German Italian Japanese Korean Polish Portuguese (Bra Russian Turkish Vietnamese
	AfterCare(R) Instructions(ER/ED)	English Spanish
		Add to Pr





• 약물 독성정보의 경우, 'Clinical Effects' 'Range of Toxicity' 'Treatment' 3가지 내용으로 상세하게 제공

#### TRUVEN HEALTH ANALYTICS

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MICROM	IEDEX <sup>®</sup> S	OLUTIONS	5					Rivaroxaban
	Drug Interactions	IV Compatibility	Drug ID	Drug Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼	
Rivarox Drug Classes: A Routes: Oral		lood Modifier Agent	All					
Quick Ansv	wers In-	n-Depth Answers	All Resu	ults				
Dosing/Ad	ministration	Toxicolo	ogy					🕰 Print
Adult Dosi	ing	Treatmen	ıt					
Pediatric E	Dosing							
FDA Uses	)	RIVA	ROXABAN ANI	D RELATED AGEN	rs			
Non-FDA U	Uses						Nonitor for evidence of bleeding. MANAGEMENT	
Dose Adju		, ,					hay be indicated in patients with severe bleeding. ( toxic ingestion and if the patient is able to maint	
Administra							ion and if the patient is able to maintain their airv	
	tive Efficacy	• Airw	vay managemer	nt: Assess airway; er	ndotracheal intubatio	on may be required in patient	ts with intracranial bleeding or severe hemoptysis	s or upper GI bleeding.
Place In Th	herapy	Anti-	idote: None.					
Medication	Safety						, gastrointestinal, vaginal). Monitor serial hemogl	
Contraindi	ications						ymptomatic patients. Prothrombin time (PT) and overdose. Plasma anti-factor Xa concentrations c	
Precaution	กร			y enough to use this		Jut may be protonged and	Verduse. I lasma and raciol via concentration o	an be medourou, our roomo ure generany
Adverse E	ffects	• Enh	anced elimination	on procedure: Rivar	oxaban is highly pro	tein bound and dialysis is not	t expected to adequately to be useful after overd	.ose.
Black Box	Warning						wo doses of oral rivaroxaban may be observed a	
REMS							ealthcare facility. Patients with minor bleeding co complications should be admitted for serial hemo	
5	ractions (single)						complications should be admitted for serial nemo consulted for anticoagulation guidance. A toxico	
N/Compo	tibility (sinale)		outed in notion	ts with severe toxicity				5

# **3. Micromedex Tools**

- 약물 상호작용 도구
- Trissel's IV Compatibility
- 약물 비교 도구
- 환자 복약 정보
- 계산기



### **Micromedex Tools**



#### Micromedex Tools 정보

- Drug Interactions
- IV Compatibility
- Drug ID
- Drug Comparison
- CareNotes
- NeoFax / Pediatrics
- RED BOOK
- Tox & Drug Product Lookup
- Formulary
- Calculators





- 여러 약물에 대한 상호작용 정보를 한 번에 분석할 수 있는 도구
- 약물 상호작용 분석 시 환자 알러지 정보 추가 가능
- 상호작용에 대한 심각도와 문헌보고도, 요약정보, 상세정보 제공
- 약물-약물 상호작용 뿐만 아니라 첨가제, 알러지, 음식, 술, 검사, 담배, 임부, 수유부에 관한 9가지의 상호작용 정보 제공

Drug I	nteractio	n R	esults	<ul> <li>Modify Inter</li> </ul>	ractions							
Refine by:	Drugs:	All		V	Severity: All	•		Documentati	ion: All	v	Гуре: All	•
Jump To:	DRUG-DRUG	i (1)	Ingredient I	Duplication (0)	ALLERGY (1)	FOOD (3)	ETHANOL (0)	LAB (2)	TOBACCO (0)	PREGNANCY (3)	LACTATION (3	i)
Drug-Dr	ug Interaction	s (1)										
Drugs:							Sev	erity:		Documentation:	Su	ımmary
CLARITH	IROMYCIN SIMV	ASTAT	IN				Q		licated	Good		Concurren an increas
Ingradia	nt Duplication	Nor	ne found)									

Drug-ALLERGY Interactions (1)			
P	<b>A</b> it	P	<b>^</b>

Drug Home Interactions IV (	Compatibility Drug	D ALLERGIES. be the allergy in the search file ck UPDATE to add your select	eld. Select the allergy and cliv	ck the ☑ (Add) button.		
<b>Drug Interactions</b>		Enter allergy:		A list in Drug interactions.		— KIMS 🍪
Type the drug name (brand or generic)	in the search field. Select	peanut				001
Enter search term: Matching drug names: (12) Penicillin (Penicillin G Potassium) Penicillin (Penicillin V Potassium) Penicillin G Benzathine/Penicillin G P Penicillin G Potassium-Sodium Chloride Penicillin G Potassium/Sodium Chloride Penicillin G Potassium/Sodium Chloride Penicillin G Sodium Penicillin V Penicillin V Penicillin V Penicillin V Penicillin V	Di C P S P X	Matching allergies: (2) PEANUT OIL PEANUTS		Allergies to check: PENICILLIN G	Cancel	
	Refine by: Drug	on Results ( : All v IG (1)   Ingredient Dup ons (1) AVASTATIN	Modify Interactions	INTERACTION DET Warning: Concurrent use of CLARITH or rhabdomyolysis. Clinical Management: The concurrent use of clarit	ROMYCIN and SIMVASTAT	Other Tools   TIN may result in an increased risk of myopathy contraindicated. If clarithromycin therapy is eatment (Prod Info ZOCOR® oral tablets, 2011).
	Drug-ALLERGY Inte			Documentation: Good Probable Mechanism:		✓ PRINT⊜ CLOSE <b>X</b>

### **Trissel's IV Compatibility**



- 여러 약물을 정맥 주사할 때의 호환성 정보 제공
- 한 가지 약물 검색 시, Solution, Y-Site, Admixture, Syringe, TPN/TNA 5가지 정보 제공
- 여러 약물을 동시 분석 시, Y-Site, Admixture, Syringe 3가지 정보 제공
- 상세정보에서는 연구방법(연구기간, 저장상태 등)을 명시하고 물리적/화학적 호환성 정보를 종합적으로 제시

V 호환성 결과 🔹 <sup>호환성 수정</sup> Selected Drug: 🖸 <b>Warfarin sodium</b>			69 인쇄
			Key : 🕜 🖉 🔔 💠 🗖
All Drugs (3)	Solution Y-Site Admixture Syringe TPN/TNA		호환성: All ▼
☑모두 체크	Y-Site Test Detail	Rating	
Gentamicin sulfate     Z Vancomycin hydrochloride	- Amikacin sulfate	•	호환됨
🗹 🗹 Warfarin sodium	- Aminophylline	0	비호환
취소 업데이트	- Ammonium chloride	▲	주의: 가변
	- Ascorbic acid injection	•	호환됨
	- Bivalirudin	•	호환됨
	- Bretylium tosylate	0	비호환
	- Cangrelor	•	호환됨
	- Cefazolin sodium	Solution	호환됨

Home Interactions IV Compatibility Drug I	Drug ID Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼
IV 호환성 결과 🔹 <sup>호환성 수정</sup>				등 인소 Key : 🕑 🖉 <u>(</u> ) 오
All Drugs (3)	Y-Site Admix	ture Syringe		호환성: All 🔻
☑모두 체크	Y-Site Test Detail			Rating
Gentamicin sulfate     Grancomycin hydrochloride	Gentamicin sulfate - V	ancomycin hydrochlo	ide	호환됨
🗹 🗹 Warfarin sodium	Gentamicin sulfate - V	Varfarin sodium		/ 비호환
취소 업데이트	Vancomycin hydrochl	oride - Warfarin sodiui	n	주의: 가변
Tip: To see additional information on IV Solutions and TPN/TNA compatibility, select a single drug from the list and choose Update.				

IV/

Gentamics sulfate 6.4mg/mL`in` D5W- Dextrose 5%Vanconycin hydrochloride 20mg/mL`in` D5W- Dextrose 5%Set aBel 적 호환성:Physically compatible. No changes in measured haze or turbidity, particulates, or color were found. 보관:Ambient room temperature near 23 °C exposed to normal fluorescent light.참조:: 8840 연구 기간:4 hours. 방법:Visual observation and electronic assessment. 87I:Simulated Y-site administration using glass test tubes.약물 1약물 2상태정보검사 매개변수Gentamicin sulfate 6.4mg/mL`in` Dextrose 5% in sodium chloride 0.9%Vancomycin hydrochloride 20mg/mL`in` Dextrose 5% in sodium chloride 0.9%Set aSet administration verseAbbott LaboratoriesImage: set administration set administration set administration set administration using glass test tubes.Tel A ministration set administration using glass test tubes.Tel A ministration set administration using glass test tubes.%Yancomycin hydrochloride 20mg/mL`in` Dextrose 5% in sodium chloride 0.9%Image: set administration set administration set administration set administration temperature near 23 °CTel A set administration set administration using glass test tubes.%Yancomycin hydrochloride 20mg/mL`in` Dextrose 5% in sodium chloride 0.9%Image: set administration set administration terseAmerican PharmaceuticalAbbott LaboratoriesImage: set administration terseImage: set administration terse%Abbott LaboratoriesImage: set administration terseImage: set administration terseImage: set administration ters	약물 1	약물 2	상태	정보	검사 매개변수
Gentamicin sulfate 6.4mg/mL`in`     Vancomycin hydrochloride 20mg/mL`in`     물리적 호환성:Physically compatible. No changes in measured haze or turbidity, particulates, or color were found.     참조:: 8840       American Pharmaceutical Partners     Abbott Laboratories     호환됨     물리적 호환성:Physically compatible. No changes in measured haze or turbidity, particulates, or color were found.     한구 기간:4 hours.       # 20:: ***     ***: ****     ***: ****     *****       ***     *****     *****       ***     *****     *****	Gentamicin sulfate 6.4mg/mL`in` D5W- Dextrose 5% American Pharmaceutical Partners	Vancomycin hydrochloride 20mg/mL`in` D5W- Dextrose 5%	<b>V</b>	물리적 호환성:Physically compatible. No changes in measured haze or turbidity, particulates, or color were found. 보관:Ambient room temperature near 23 °C exposed to normal	참조:: 8840 연구 기간:4 hours. 방법:Visual observation and electronic assessment. 용기:Simulated Y-site administration
6.4mg/mL`in` Dextrose 5% in sodium chloride 0.9% American Pharmaceutical Partners Note that the section of th	약물 1	약물 2	상태	정보	검사 매개변수
약물 1 약물 2 상태 정보 검사 매개변수	Gentamicin sulfate 6.4mg/mL`in` Dextrose 5% in sodium chloride 0.9% American Pharmaceutical Partners	hydrochÍoride 20mg/mL`in` Dextrose 5% in sodium chloride 0.9%	호환됨	compatible. No changes in measured haze or turbidity, particulates, or color were found. 보관:Ambient room temperature near 23 °C exposed to normal	면구 기간:4 hours. 연구 기간:4 hours. 방법:Visual observation and electronic assessment. 용기:Simulated Y-site administration
	약물 1	약물 2	상태	정보	검사 매개변수

PRINT 🔒 CLOSE 🗙

# 약물 비교 도구



- 약물을 한 눈에 비교하기 위한 '약물 비교 도구(Drug Comparison)' 제공
- 요약 정보를 병렬적으로 비교 가능

Home	Drug Interactions	IV Compatibility	Drug ID	Drug Comparison	CareNotes®	NeoFax® / Pe

#### **Drug Comparison**

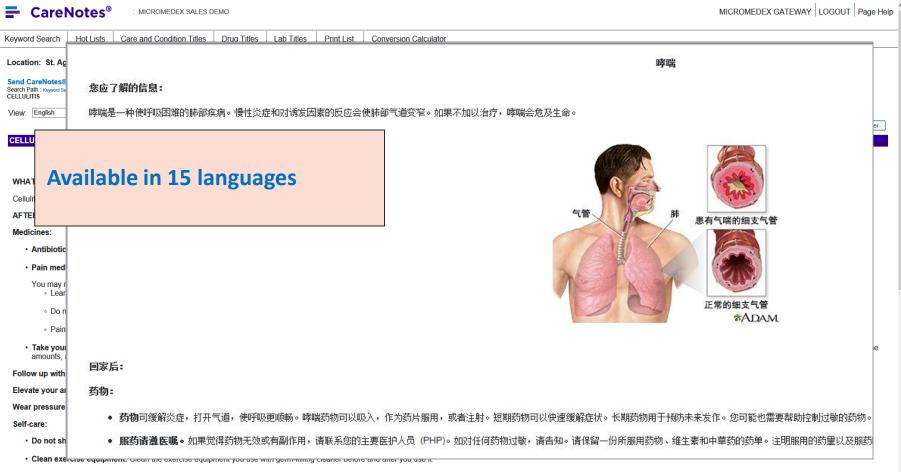
Type the drug name (brand or generic) in the search field. Select the drug and click the 🗾 (Add) button.

Enter search term:			
Matching drug names: (6)	Drug Comparison Results 🥡 🖉 🖉		
Naproxen Naproxen Na/Sumatriptan Succinate Naproxen Sodium Naproxen Sodium/Sumatriptan Succinate Naproxen/Esomeprazole magnesium	열에 표시 1 [buprofen 200	열에 표시 2 Naproxen V	
	이동위치: ▲ 페이지 상단   Dosing & Indications   Black Box Warning   Contraindications/Warnings   Drug Interactions (single)   Adverse El References Mechanism of Action/Pharmacokinetics	Effects   Name Info   Mechanism of Action/Pharmacokinetics   Administration/Monitoring   How Supplied   Toxicology   Clinical Teaching   Mechanism of Action/Pharmacokinetics	
	Mechanism of Action DRUGDEX의 자세한 정보 보기 • )	Mechanism of Action DRUGDEX의 자세한 결봉 보기 > >	
	Ibuprofen is a nonsteroidal antiinflammatory drug (NSAID) that exhibits analgesic and antipyretic activities by inhibiting prostaglandin synthesis [3][14]	Naproxen is a nonsteroidal anti-inflammatory drug (NSAID) with analgesic and antipyretic activities. Its mechanism of action     is unknown but it is thought to be related to inhibition of prostaglandin synthetase [9].	
	Pharmacokinetics	Pharmacokinetics	
	DRUGDEX의 자세한 정보 보기 •	DRUGDEX의 자세한 점보 보기 +	
	Absorption	Absorption	
	<ul> <li>Tmax, oral: 1 to 2 hr [14]</li> <li>Effects of food: Tmax increased from 1.34 to 1.96 hours with single dose [15]</li> <li>Distribution</li> <li>Vd: 0.11 to 0.18 L/kg [16]; (Tech Info Motrin(R), 1981)</li> </ul>	<ul> <li>Oral, tablet: time to peak concentration, 2 h to 4 h [9]</li> <li>Oral, suspension: time to peak concentration, 1 h to 4 h [9]</li> <li>Oral, delayed release tablet: time to peak concentration, 4 h to 6 h (2 h to 12 h)</li> <li>Bioavailability: 95% [9]</li> <li>Effect of food: increases Tmax to 12 h (range 4 h to 24 h) [9]</li> </ul>	
	Protein binding, primarily albumin; 99% [16]; (Davies, 1975)[17][18]	Distribution	
	Metabolism  • Liver, rapidly metabolized [11]	<ul> <li>Vd: 0.16 L/kg [9]</li> <li>Protein binding: greater than 99% [9]</li> </ul>	





#### • 환자 복약 지도를 위한 '환자 복약 정보(CareNotes®)' 제공



· Clean your wound: Wash it regularly with soap and water. Watch carefully for signs of infection.

· Take care of your skin: Use lotion to prevent dry, cracked skin.





Home Drug Drug Drug Drug IV Compatibility Drug ID Co	ug omparison CareNotes® NeoFax® / Pediatrics	Other Tools 🔻	
Calculators View: by category   by alphabetical list >			
ANTIDOTE DOSING AND NOMOGRAMS	DOSING TOOLS		CLINICAL CALCULATORS
Alcohols/Ethylene Glycol Blood Level     Ethanol - IV Dosing for Methanol/Ethylene Glycol Overdose	ACLS/PALS Guidelines     Dobutamine Dosing Calculate		<ul> <li>Alveolar-Arterial Oxygen Gradient</li> </ul>
NAC Dosing for Acetaminophen Overdose     Toxicity Nomograms	Dopamine Dosing Calculator     Epinephrine Dosing Calculato		MEASUREMENT CALCULATORS
ABORATORY VALUES	Epinephrine Dosing Calculato     Heparin Dosing Calculator		Body Mass Index Calculator     BSA and Lean/Ideal Body Weight Calculator
Anion Gap Calculator	IV Rate Calculator     Nitroglycerin Dosing Calculate		Metric Conversions Calculator     SIU Conversion Calculator
Creatinine Clearance Calculator     Phenytoin Level Adjustment Calculator	Nitroprusside Dosing Calculat     Norepinephrine Dosing Calcul		
	<ul> <li>Norepinephrine Dosing Calcu</li> </ul>	tor - Pediatric	

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.5		CLINICA	ł
: G	Creatinine Clearance Calculator	[ <u>CLOSE</u> ]	
2 D			
00	Actual Total Body Weight:	● kg ○ lb	S
: D	Body Length:	● cm ○ in	
: D	Age:	Years O Months	ľ
sin	Gender: 🖲	M O F	ri
ם רב	Serum Creatinine:	mg/dL J	¢
le I rin rin	Method: <ul> <li>Estimate from serum creatini</li> <li>Calculate from 24-hour urine</li> </ul>		

# 4. Micromedex Search Skill

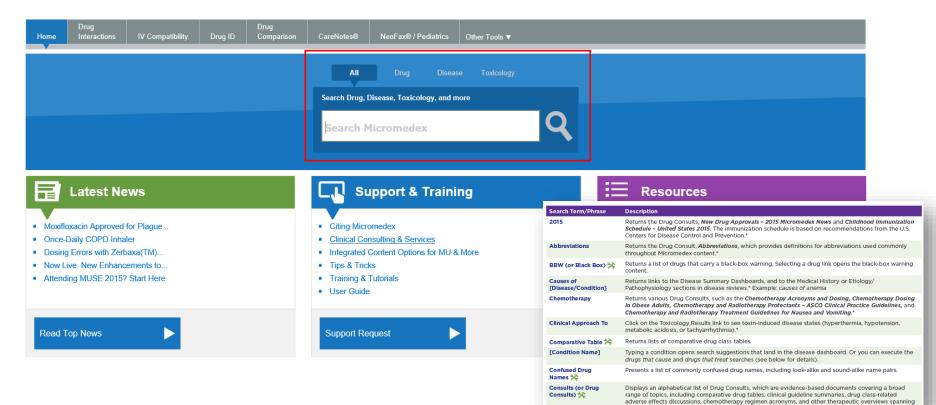
- 검색 방법
- 자동 완성 기능
- 유사 검색어 찾기 기능
- 사용자 중심의 UI
- 업데이트
- Pub-med 링크





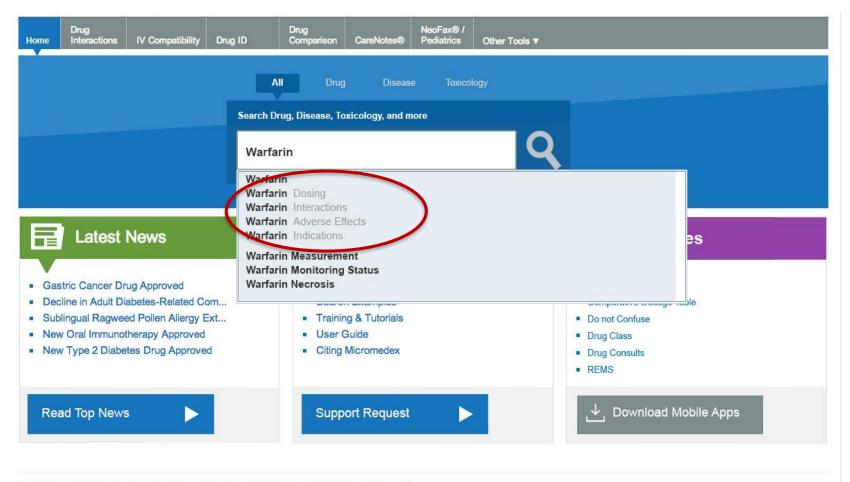


- 통합 검색창에서 특정 DB(Drug, Disease, Toxicology)로 제한하여 검색가능
- 기본적으로 제품명(ex. Xarelto), 성분명(ex. Rivaroxaban), 약물 계열(ex. Factor Xa Inhibitor), 질병명(ex. Deep venous thrombosis)으로 검색 가능
- 구글링 방식을 채택하여 문장 검색 가능(ex. Drugs that treat breast cancer)
- BBW, REMS 등 자주 사용하는 특정 검색어도 검색 가능



자동 완성 기능

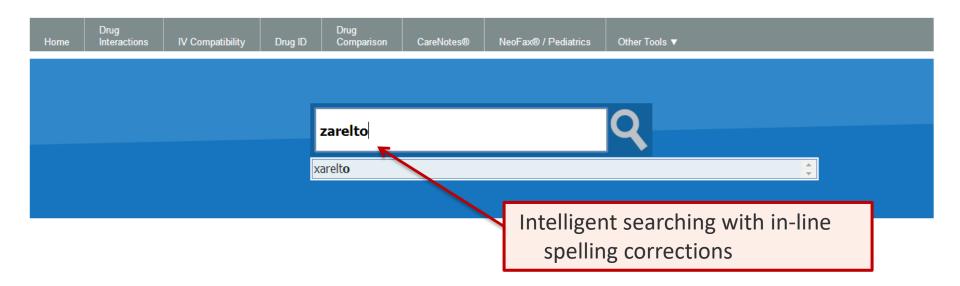




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## 유사 검색어 찾기 기능





### 사용자 중심의 UI 제공



- 좌측 내비게이션을 통해 빠른 카테고리 이동 가능
- 우측 DB 연결창을 통해 해당 성분 정보 페이지에서 관련 있는 DB로 연결

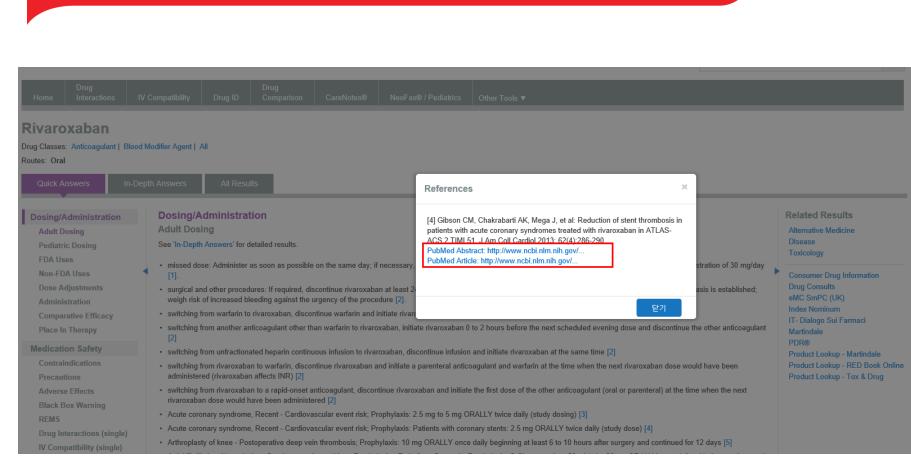
Drug Home Interactions IV	V Compatibility Drug ID	Drug Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼				
Rivaroxaban Drug Classes: Anticoagulant   Blood / Routes: Oral	Modifier Agent   All								
Quick Answers In-Dep	epth Answers All Resul	lts							
Dosing/Administration Adult Dosing Pediatric Dosing	Dosing/Administrat Adult Dosing See 'In-Depth Answers' for de				🖨 Print	Related Results Alternative Medicine Disease Toxicology			
FDA Uses Non-FDA Uses Dose Adjustments Administration	mg/day [1].	dures: If required, disc	continue rivaroxab	ban at least 24 hours prior to p	15 mg twice daily may take two 15-mg tablets at once to ensure administration of 30 procedure and restart after the procedure as soon as adequate hemostasis is established;	Consumer Drug Information Drug Consults eMC SmPC (UK)			
Comparative Efficacy Place In Therapy	<ul> <li>switching from warfarin to</li> </ul>	o rivaroxaban, discont	ntinue warfarin and	d initiate rivaroxaban when INF	R is less than 3 [2] 0 to 2 hours before the next scheduled evening dose and discontinue the other	Index Nominum IT- Dialogo Sui Farmaci Martindale PDR®			
Medication Safety Contraindications Precautions	<ul> <li>switching from unfractional</li> </ul>	an to warfarin, discont		, ,	n and initiate rivaroxaban at the same time [2] coagulant and warfarin at the time when the next rivaroxaban dose would have been	PDR® Product Lookup - Martindale Product Lookup - RED Book Online Product Lookup - Tox & Drug			
Adverse Effects Black Box Warning	<ul> <li>switching from rivaroxabar rivaroxaban dose would have</li> </ul>	an to a rapid-onset an have been administer	red [2]		te the first dose of the other anticoagulant (oral or parenteral) at the time when the next DRALLY twice daily (study dosing) [3]				
REMS Drug Interactions (single) http://www.micromedexsolutions.com/m	Acute coronary syndrome     Arthroplasty of knee - Pos	e, Recent - Cardiovas ostoperative deep vein	scular event risk; P n thrombosis: Propl	Prophylaxis: Patients with coro	e daily beginning at least 6 to 10 hours after surgery and continued for 12 days [5]				

## 업데이트 현황



- 매일 중요 업데이트
- 매주 정기 업데이트

Drug Home Interactions	IV C	ompatibility	Drug ID	Drug Comparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼
Glimepiride Drug Classes: 2nd Generation S Routes: Oral	Sulfonylu	rea   Antidiabe	etic   All				
Quick Answers	In-Depth	Answers	All Result	S			
Dosing/Administration Adult Dosing Pediatric Dosing FDA Uses Non-FDA Uses Dose Adjustments	•	1. Institute http://ismp. 2. Thompse	for Safe Medicat org/T	ion Practices: ISN	ug names look or so	drug names. Institute for Saf und alike. Am J Health Syst F	₽ Medication Practices. Huntingdon Valley, PA. 2005. Ava
Administration Comparative Efficacy Place In Therapy Medication Safety		3. Product 4. Product	Information: AM/	ARYL(R) oral table	ets, glimepiride oral ets, glimepiride oral	tablets . Sanofi-Aventis U.S. I	LC (Per FDA), Bridgewater, NJ, 2012. LLC (per FDA), Bridgewater, NJ, 2013. re 2014; 37 Suppl 1:S14-S80.
Contraindications Precautions Adverse Effects		PubMed Al PubMed Al 6. Isselbac	bstract: http://ww rticle: http://www. her KJ, Braunwa	w.ncbi.nlm.nih.go ncbi.nlm.nih.gov/ ld E, Wilson JD, e	v/  et al (Eds): Harrison'	s principles of internal medici	ne, 13th. McGraw-Hill, Inc, New York, NY, 1994.
Black Box Warning REMS Drug Interactions (single	)	8. Therape	utic Goods Admi	2			utic Goods Administration. Woden, Australian Capital Terri
IV Compatibility (single) Pregnancy & Lactation		Last Modif	fied: April 27, 20	)15			



PubMed 링크



# 5. Micromedex 활용

- 병원에서 Micromedex 활용
- 학교에서 Micromedex 활용
- 실험 연구에서 Micromedex 활용



### 병원에서 Micromedex 활용



#### 1) 병원 전체에서 활용 가능

- : 동시이용자수 제한 없이 이용 가능
- : 임상의, 약사, 간호사가 모두 활용하는 데이터베이스
- : 환자 진료 시, 가장 빠르게 답변 제공하는 데이터베이스
- 2) 소아과, 산부인과, 응급의학과 등 다양한 진료과에서 활용 가능
  : 소아, 노인, 임부등 특정 환자에 관한 상세 정보를 제공하는 데이터베이스 제공
  : 환자의 특성에 맞는 용량/용법, 부작용 정보 제공

#### 3) Point Of Care Tool 및 EBM 정보원으로 활용

: 가장 빠른 신약 정보 업데이트

- : Reference 요약으로 근거 제공
- : 환자 진료 시 활용할 수 있는 근거중심 약물정보 데이터베이스

#### 4) 다양한 복약지도문 활용 가능

: 외국인 환자를 위한 복약지도문 제공 가능 : 신약에 대한 복약지도문 업데이트 : 복약지도문 자체 제작 시 활용할 수 있는 정보 제공 : 의약품 이미지 및 질병에 관한 이미지 제공

#### 5) 신약선정 시 활용

: 약물 비교 테이블 쉽게 제작 가능 : 약물비교평론에서 약물간 비교효능에 관한 문헌 리뷰 제공함. : 우리 병원에서 신약 선정 시, 유용하게 활용

### 학교에서 Micromedex 활용



#### 1) 학생들 강의용으로 사용

- : 필수 의약품정보원 모두 제공됨 (Lexicomp/ Martindale /AHFS DI / Facts and Comparisons)
- : 학생들에게 알맞은 용도의 정보 제공
- : 약물 정보 외에 Interaction Checking, IV Compatibility, 계산기, 복약지도문 등 제공
- : 약물치료학 등의 강의에서 활용
- : 복약지도문 제작 실습 시 정보원으로 활용

#### 2) 학생들 실습용으로 사용

- : 실습지에서 활용할 수 있는 데이터베이스
- : 모바일 어플리케이션 구독 시, 모바일 설치하여 실습지에서 활용
- : 현재 16개 약학대학에서 실습용 정보원으로 활용하고 있음

### 실험 연구에서 Micromedex 활용

- 실험 및 연구정보인 Lab Test 데이터베이스도 제공
- 학교에서 연구용 및 학생들이 현재 이뤄지고 있는 연구에 대한 정보원으로 활용 가능

**KIMS** 

Home	Drug Interactions	IV Compatibility		rug omparison	CareNotes®	NeoFax® / Pediatrics	Other Tools ▼		
42 resu	ults found	l for: "Alar	nine amino	otransfe	rase mea	surement"			
All Resu	its								
Filter by All (42) Drug (5) Disease (29) Lab (8)	)	Alanine Labo pyi Doct	ults for "Alanine an aminotransferase oratory Test: Detaile ruvate transaminase ument section: « Synonyms > e/creatinine clearar	measurement d evidence-based measurement GP	d information ( <i>Lab A</i> P <b>T measurement S</b> GF				
	Нол	Drug	IV Compatibili	d avidanca hasar	d information (Lab A Drug		NeoFax® / Pediatrics	Other Tools ▼	
	Syno Refer Test I INDICA ABNOP DRUG COLLE TEST M LOINC COMM RELAT	rence Range Definition			실험실 자문™ () <b>) DRUG/LAB</b> HYDROXOCOBA METRONIDAZOL	E - interference in serun	measurement eed serum alanine aminotran n alanine aminotransferase n ne aminotransferase measu	measurement	

## 6. Mobile Micromedex

Mobile User Guide



#### **Mobile User Guide**



현재 Micromedex를 구독하고 계신 경우, 추가 비용 없이 이용하실 수 있습니다.



[앱 다운로드 및 사용방법]

- Apple Store나 Google Play Store에서 'Micromedex'를 키워드로 검색해주세요.
- 'Micromedex'를 입력하여 앱을 다운로드 받습니다.
- 앱을 실행하면 인증번호를 입력하게 되어있습니다.
- Micromedex 웹 홈페이지 오른쪽 하단 'Download Mobile Apps'에 들어가세요

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	Second Deep, Dessen, Second and Second	and the second
	Smarth Harsenader	Q
Latest News	Support & Training	: Resources
Incidents COPID Interlay	Circy Managements	Oak for Parings
noing Empire with Zachana(794) the Link New Esthancements in	Clinical Consulting & Services     Vengented Consult Options for MCA Main	Comparative Tables     Do has Contrary Orap Last
Abendang MA KIE, 20107 Wart Hore	· Ten & Tento	* Drug Classers
Tet the Facts Height Performance	Transing & Tutorati     Totar Gunite	Orup Consults     Initiatis
text for News	Super-Chapters -	🔆 Tanaminat Mittin Appe

#### **Mobile User Guide**

	K	M	S	<pre>State</pre>
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Micromedex() Drug Interactions
The Microwedea Drivg Interactions app for Apple, and Android devices is available for FREE for Micromedias sustainers.     You can access these apps via the Transoft App Store (Apple devices) is Google Play8 (Android devices)     You can activate the app by following the single instructions before
Simple instructions for installation:
Step 1: Visit the ITures App Store (Apple devices), or Google Play Store (Android devices) and search for "Micromodes."
Step 2: From all the Micromodes app results, select Micromodes Drug Interactions, You may be prompted to enter your Apple or Google D
Step 3: The app should download directly to your device. (If you visited the ITures App Store on your PC rather than your device, you may have to sync your device to ITures on your PC, in order to load the app onto your device.)
Step 4: Open the app on your device. Enter the parameter

- 'Step 4'에 기관별 인증번호를 확인하실 수 있습니다. 확인된 6자리의 영문과 숫자조합의 인증번호를 앱에 입력해 주세요.
- 애플 휴대폰을 이용하고 계신 경우, 기존과 동일한 방식으로 iTunes App Store에서 아래와 같은 3가지 앱을 다운 로드 받아 이용하실 수 있습니다.
- Free Micromedex Drug Reference
- Micromedex Drug Interactions
- Micromedex IV Compatibility
- Micromedex NeoFax Essentials
- Micromedex Pediatrics Essentials

#### **Mobile User Guide**



#### **Micromedex Solutions Accessible Anytime, Anywhere**



## 7. Appendix

- Micromedex 요약분석
- 국내 기관별 사용 현황



### ① Micromedex 요약 분석



	Micromedex
Drug summary, detail information	- Drug Points 요약 정보제공 - Drugdex 자세한 정보 제공 - 복용정보는 Carenotes 에서 제공 - 전문의료인용 복용지침 clinical teaching guide 제공 - FDA-Labelled indication정보제공 - Non-FDA Indication 정보 제공
문헌 권장 등급	-MICROMEDEX는 엄격한 문헌 평가 정책에 따라 정보를 구축 -문헌보고도, 권장/근거 등급을 제공하여 정확한 의사 결정을 지원
NICE 인증여부	MICROMEDEX는 객관적인 편집과정에 대하여 의약학 DB 중 유일하게 NICE 인증을 받은 정보원임.
Drug monograph 임상연구 자료	-임상연구 자료 제공으로 객관적인 판단 지원,
약물정보양	75-100 페이지/약물 1개
편집위원	-90명이상의 내부 편집인력 (경쟁사에 비해 약 7배 이상 큰 규모) -컨텐츠 구축을 위해 전세계 20만 여 종의 참고 문헌 검토

### ② Micromedex 요약분석



	Micromedex
Drug Interaction	<ul> <li>9가지 drug checker를 제공</li> <li>Drug-Allergy를 비롯한 총 9개 분류에 따른 상호작용 제공</li> <li>Drug-Drug</li> <li>Ingredient Duplication</li> <li>Drug-Allergy</li> <li>Drug-Food</li> <li>Drug-Ethanol</li> <li>Drug-Lab</li> <li>Drug-Tobacco</li> <li>Drug-Pregnancy</li> <li>Drug-Lactation</li> <li>분류별 상호작용 확인에 용이한 화면구성</li> </ul>
IV Compatibility Mobile	<ul> <li>Trissel's IV Compatibility 정보 제공</li> <li>Y-Site / Admixture / Syringe에 해당하는 Compatibility 정보 제공</li> <li>Solution과의 Compatibility 확인 가능</li> <li>Storage 등 해당 의약품의 특성 제공</li> <li>모든 기종에 모바일 버전 제공</li> <li>이용자 수에 따른 추가 과금없음</li> </ul>
업데이트 주기	- 애공지 구에 띠는 구기 퍼금ᆹ금 - 매일 업데이트

# Thank You.

