

UpToDate 医師向け 利用方法マニュアル

UpToDateは全て海外のエビデンスに基づき作成されており、
各国における承認内容と異なる場合がありますのでご注意ください

※利用方法に関してご不明な点がございましたら
図書室もしくは下記担当者までお知らせください

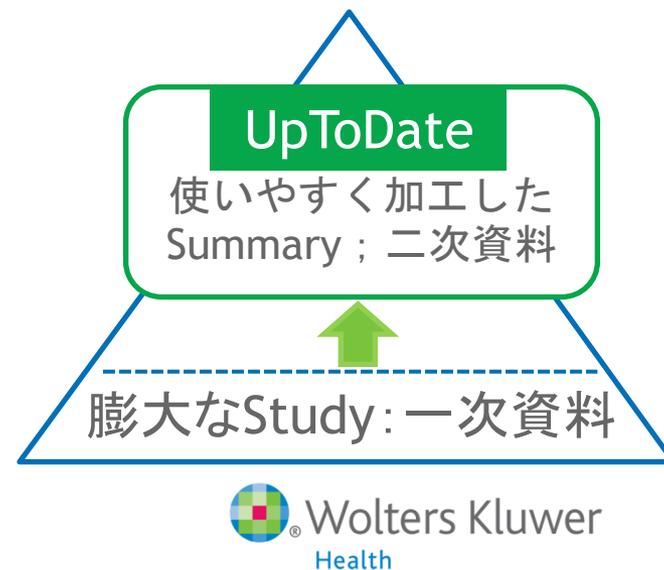
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UpToDateとは？

- ❖ 患者診療の現場で先生方が抱く疑問に対し、素早くかつ正確に回答を提供できるよう開発されたインターネットを媒体とした臨床情報サービスです
- ❖ 世界で最も広く利用されている臨床意思決定サポートシステムです
- ❖ 世界158カ国、70万人以上の先生方にご利用いただいています
(利用施設数は世界で25000以上です)
- ❖ 日本においても既に650以上の施設に導入いただいています



UpToDateの特徴

- ❖ 各分野のエキスパートの医師(5100名以上)が執筆を担当しています
- ❖ 450以上の医学専門誌や診療ガイドライン、臨床データベース、臨床試験を精査してコンテンツを作成⇒エビデンスベースの医学情報
- ❖ 診断・治療・予防・予後などトピック毎に整理し、推奨すべき方法を提示しています(21分野・10,000以上のトピック)
- ❖ 最新の医療を常に反映するため、日々更新しています
1992年に初めて発行されてから2012年末までで計102回更新
→2013年1月～8月だけで既に103回更新
- ❖ 100%先生方からいただいている購読料で成り立っており、製薬企業などのスポンサーシップを一切受けていません
⇒バイアスがかからない公平性の高い情報を提供しています

他のトピック閲覧時、このトップ画面へ戻りたい時にクリック

新規検索: Search in [another language](#)

日本語で検索 全てのトピック

🔍 新登場! 日本語検索機能 日本語または英語で検索して下さい

🔍 薬物相互作用

ご自分の言語での検索

- 日本語でUpToDateを検索してナビゲートすることができます。トピックをクリックすると、英語で表示されます。
- 新機能! 日本語で検索語の最初を入力すると、候補が表示されます。
- 言語の設定を変更するには、"Languages" (右上側) または "Search in another Language" (検索ボックスの上) をクリックしてください。

UpToDateへのアクセスURL
<http://www.uptodate.com/online>
※ログインID, パスワードの入力は不要です

正しく接続できていればご契約施設名が表示されます

分野別に簡易版・詳細版の患者向け情報ページを掲載

Contents: Patient Information

UpToDate offers different levels of patient education materials to meet the varying information needs of your patients.

The Basics

"The Basics" are short (1 to 3 page) articles written in plain language. They answer the 4 or 5 most important questions a person might have about a medical problem. These articles are best for people who want a general overview.

[View all The Basics](#)

小学校高学年レベルの英語

Beyond the Basics

"Beyond the Basics" articles are 5 to 10 pages long and more detailed than "The Basics". These articles are best for readers who want a lot of detailed information and who are comfortable with some technical medical terms.

[View all Beyond the Basics](#)

高校生レベルの英語

患者様へ提供する情報を疾患ごとに表示しています

各疾患の原因、症状、治療、予防や、患者団体の連絡先（米国のみ）などの情報を表示しています



This site complies with the HONcode standard for trustworthy health information: [verify here.](#)

To view a list of all available topics, click on the appropriate health category below.

- Allergies and asthma
- Arthritis
- Autoimmune disease
- Blood disorders
- Bones, joints, and muscles
- Brain and nerves
- Cancer
- Children's health
- Diabetes
- Diet and weight

- Digestive system
- Ear, nose, and throat
- Eyes and vision
- General health
- Heart and blood vessel disease
- HIV and AIDS
- Hormones
- Infections and vaccines
- Kidneys and urinary system
- Liver disease

- Lung disease
- Men's health issues
- Mental health
- Pregnancy and childbirth
- Senior health
- Skin, hair, and nails
- Sleep
- Surgery
- Travel health
- Women's health issues

分野別に最新情報の掲載状況が更新月とともに確認可能

Contents: What's New

Our editors select a small number of the most important updates and share them with you via What's new. See these updates by clicking on the specialty you are interested in below. You may also type "What's new" into the search screen after you have logged in to UpToDate.

- Practice Changing UpDates
- What's new in adult and pediatric emergency medicine
- What's new in allergy and immunology
- What's new in cardiovascular medicine
- What's new in dermatology
- What's new in drug therapy
- What's new in endocrinology and diabetes mellitus
- What's new in family medicine
- What's new in gastroenterology and hepatology
- What's new in general surgery
- What's new in geriatrics
- What's new in hematology
- What's new in hospital medicine
- What's new in infectious diseases
- What's new in nephrology and hypertension
- What's new in neurology
- What's new in obstetrics and gynecology
- What's new in oncology
- What's new in pediatrics
- What's new in primary care internal medicine

編集スタッフが注目する
新しいトピックを
専門領域ごとに表示

TOPIC OUTLINE

- INTRODUCTION
- RHEUMATOLOGY; PRIMARY CARE; FAMILY MEDICINE; CARDIOLOGY (AUGUST 2013)
 - Cardiovascular risk of NSAIDs
- INFECTIOUS DISEASES (AUGUST 2013)
 - Treatment of AIDS-related CMV retinitis
- GASTROENTEROLOGY; PRIMARY CARE, INFECTIOUS DISEASES (JULY 2013)
 - Screening for hepatitis C virus (HCV)
- INFECTIOUS DISEASES, PRIMARY CARE, FAMILY MEDICINE (JULY 2013)
 - Pre-exposure prophylaxis against HIV infection for injecting drug users
- GYNECOLOGY, PRIMARY CARE, FAMILY MEDICINE (MAY 2013, MODIFIED JUNE 2013)
 - HPV triage for women ages 30 and older with LSIL on cervical cytology
- GYNECOLOGY, PRIMARY CARE, FAMILY MEDICINE (MAY 2013, MODIFIED JUNE 2013)
 - Management of abnormal cervical cytology in women aged 21 to 24 years
- ONCOLOGY, GYNECOLOGY, GENERAL SURGERY (JANUARY 2013, MODIFIED JUNE 2013)
 - Duration of adjuvant tamoxifen for breast cancer
- CARDIOVASCULAR MEDICINE (JUNE 2013)
 - Rivaroxaban as addition to aspirin and clopidogrel for an acute coronary

Practice Changing UpDates

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 David M Rind, MD

Disclosures

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.
Literature review current through: Aug 2013. | **This topic last updated:** Sep 17, 2013.

INTRODUCTION — This section highlights selected specific new recommendations and/or updates that we anticipate may change usual clinical practice. Practice Changing UpDates focus on changes that may have significant and broad impact on practice, and therefore do not represent all updates that affect practice. These Practice Changing UpDates, reflecting important changes to UpToDate over the past year, are presented chronologically, and are discussed in greater detail in the identified topic reviews.

RHEUMATOLOGY; PRIMARY CARE; FAMILY MEDICINE; CARDIOLOGY (AUGUST 2013)

Cardiovascular risk of NSAIDs

- In patients who require high doses of a nonselective NSAID for long-term use and who have known cardiovascular disease or are at high risk for cardiovascular events, we recommend treatment with naproxen rather than ibuprofen or diclofenac (**Grade 1B**). We also prefer naproxen to other nonselective NSAIDs, although there are few data evaluating nonselective NSAIDs other than ibuprofen and diclofenac in patients at high cardiovascular risk.

Most nonsteroidal antiinflammatory drugs (NSAIDs) increase the risks of major cardiovascular events. The magnitude of risk is best illustrated by a meta-analysis of data from over 300,000 participants in over 700 trials that compared nonselective NSAIDs (used at the upper end of their dose range) or coxibs with either placebo or another nonselective NSAID or coxib [1]. Compared with placebo, use of high-dose diclofenac or a coxib increased major cardiovascular events (nonfatal MI, nonfatal stroke, or vascular death) by about 40 percent. High-dose ibuprofen increased the risk of major coronary events but not major vascular events. High-dose naproxen did not increase major cardiovascular events, major coronary events, or vascular death. The estimated excess absolute risk of a major vascular event or death with use of diclofenac, coxib, and possibly ibuprofen was two events per 1000 persons per year in patients at low baseline cardiovascular risk and seven to eight events per 1000 persons per year, including two fatal events, in patients at high baseline cardiovascular risk. Naproxen is therefore the preferred nonselective NSAID when long-term use is needed in patients at increased risk for cardiovascular disease. (See "[Nonselective NSAIDs: Adverse cardiovascular effects](#)", section on 'Risk of MI, stroke, and death'.)

INFECTIOUS DISEASES (AUGUST 2013)

Treatment of AIDS-related CMV retinitis

- For initial therapy of patients with AIDS-related cytomegalovirus retinitis and immediately sight-threatening lesions, we recommend intravitreal injection of ganciclovir or foscarnet plus systemic therapy for cytomegalovirus rather than systemic therapy alone (**Grade 1B**). If oral valganciclovir is initiated within 24 hours of the initial intravitreal injection, subsequent injections are probably not necessary.

大きな変更があったトピックを
 更新順に領域ごとに表示
 ⇒専門領域以外の最新情報も
 簡単に把握できます

計算ツールの入力例: BMI

UpToDate® | 全てのトピック ▼ | 検索 | Languages | 当社について | 連絡先 | ヘルプ

新規検索 | 患者向け情報 | 最新情報 | **計算ツール** | CME 24.5 | マイアカウント | ログアウト

Contents » Calculators

Specialties
Patient Information
What's New
Calculators
Authors and Editors

Contents: Calculators

You receive the entire UpToDate library of specialties with your subscription. Click on a section below to view a detailed list of topics associated with that particular section. If you'd like to see the table of contents for other specialties, click here.

Cardiology calculators	Hematology calculators	Oncology calculators
Critical care calculators	Hospital medicine calculators	Pediatrics calculators
Emergency med calculators	ID calculators	Primary care calculators
Endocrinology calculators	Nephrology calculators	Pulmonology calculators
Gastroenterology and Hepatology calculators	Neurology calculators	Rheumatology calculators
General surgery calculators	Obstetrics calculators	

Patient Information

分野別に臨床で使用する数値を簡単に算出可能です

Contents: Calculators

You receive the entire UpToDate library of specialties with your subscription. Click on a section below to view a detailed list of topics associated with that particular section. If you'd like to see the table of contents for other specialties, click here.

Cardiology calculators	Hematology calculators	Oncology calculators
Critical care calculators	Hospital medicine calculators	Pediatrics calculators
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Endocrinology calculators	Nephrology calculators	Pulmonology calculators
Gastroenterology and Hepatology calculators	Neurology calculators	Rheumatology calculators
General surgery calculators	Obstetrics calculators	

BMIはここに掲載されています

どこに計算ツールがあるか分からない場合、
新規検索で入力して見つけることも可能です

計算ツールの入力例: BMI

Contents: Hospital medicine calculators

Clinical criteria

- Calculator: APACHE II scoring system
- Calculator: CIWA-Ar Clinical Institute Withdrawal Assessment for Alcohol scale
- Calculator: Clinical diagnosis of endocarditis*
- Calculator: Clinical indicators for malignant hyperthermia
- Calculator: Community-acquired pneumonia severity index (PSI) for adults
- Calculator: DVT probability: Wells score system
- Calculator: Pressure ulcer risk stratification (Braden score)
- Calculator: Pulmonary embolism Wells score
- Calculator: Thrombolysis in Myocardial Infarction (TIMI) score for ST elevation acute myocardial infarction
- Calculator: Thrombolysis in Myocardial Infarction (TIMI) score for unstable angina or non ST elevation myocardial infarction
- Calculator: Venous clinical severity score

Medical equations

- Calculator: A-a gradient (alveolar-arterial gradient; AaG)
- Calculator: Absolute neutrophil count
- Calculator: Adult burn injury fluid resuscitation (Parkland crystalloid estimate)
- Calculator: Body Surface Area (Mosteller, square root method)
- Calculator: Body mass index (BMI; Quetelet's index)
- Calculator: Calcium correction in hypoalbuminemia
- Calculator: Calcium correction in hypoalbuminemia (SI units)
- Calculator: Cardiac Output
- Calculator: Corticosteroid Medication Dosing Conversions (glucocorticoid effect)
- Calculator: Creatinine clearance (measured)
- Calculator: Creatinine clearance estimate by Cockcroft-Gault equation
- Calculator: Creatinine clearance estimate by Cockcroft-Gault equation (SI units)
- Calculator: Fractional excretion of sodium
- Calculator: Fractional excretion of sodium (SI units)

計算ツールの入力例: BMI

「新規検索」から検索するとこのような検索結果が出てきます



The screenshot shows the UpToDate search interface. The search bar contains "BMI" and the search button is visible. Below the search bar, there are navigation tabs: "新規検索" (New Search), "患者向け情報" (Patient Information), "最新情報" (Latest Information), "計算ツール" (Calculators), "CME 99.5", and "マイアカウント" (My Account). The search results are titled "BMI (bmi)の検索結果". On the left, there is a sidebar with filters: "全てのトピック" (All Topics), "成人" (Adult), "小児" (Pediatric), "患者向け" (Patient), and "画像" (Image). The main content area displays a list of search results. Two results are highlighted with orange boxes: "計算ツール:成人の体格指数(BMI)(患者情報)" and "計算ツール:体格指数(BMI, Quetelet指数)".

UpToDate® BMI 全てのトピック

新規検索 患者向け情報 最新情報 計算ツール CME 99.5 マイアカウント

"BMI (bmi)"の検索結果

- 全てのトピック
- 成人
- 小児
- 患者向け
- 画像 

- 計算ツール:成人の体格指数(BMI)(患者情報)
- 成人の肥満のスクリーニングおよび臨床評価
- 計算ツール:体格指数(BMI, Quetelet指数)
- 小児の成長測定
- 肥満手術患者のケアのための病院設備および職員配置
- 成人心疾患の小児期の予防:健康な生活様式の向上およびリスクのある小児の識別
- 小児の身体組成測定
- 癌生存における食事、身体活動、および体重の役割
- 成人における神経性無食欲症:認知行動療法(CBT)
- 重度の肥満のマネジメントのための肥満手術:説明
- 緩和ケア:悪液質と食欲不振の評価および管理
- 自家造血幹細胞移植の適格性判定
- 小児の脂質異常症ののマネジメント
- 経皮内視鏡的胃瘻造設術(PEG):造設および定期的なケア

計算ツールの場合、トピックタイトルに必ず「計算ツール」と記載されています

計算ツールの入力例: BMI

Calculator: Body mass index (BMI; Quetelet's index)

$$\text{BMI} = (\text{Weight}/2.205) / (\text{Height}/39.37)^2$$

Input:

Height:

Weight:

Result:

BMI: kg/m²

Decimal Precision:

数値を入力いただければ
すぐに結果が表示されます

Body Mass Index Interpretation

BMI <18.5: Below normal weight
BMI >=18.5 and <25: Normal weight
BMI >=25 and <30: Overweight
BMI >=30 and <35: Class I Obesity
BMI >=35 and <40: Class II Obesity
BMI >=40: Class III Obesity

Notes

- The default unit of measure for weight is pounds. Please verify that the correct unit of measure has been selected.

References

1. National Institutes of Health (NIH), National Heart, Lung, and Blood Institute (NHLBI). The practical guide: identification, evaluation, and treatment of overweight and obesity in adults. Bethesda: National Institutes of Health.

日本語検索機能が強化されました！

従来使用していた



に加えて、新たに



も使用することで
文章による検索も可能になりました

新規検索:

Search in [another language](#)

蜂巣炎

- 新登場！日本語検索機能 日本語または英語で検索
- 薬物相互作用

- ▼ 画像
- 全てのトピック
 - 成人
 - 小児
 - 患者向け
 - 画像

検索範囲をトピックで絞り込むことが可能です

※デフォルトは「全てのトピック」になっています

ご自分の言語での検索

- 日本語でUpToDateを検索してナビゲートすることができます。トピックをクリックすると、英語で表示されます。
- 言語の設定を変更するには、"Languages" (右上側) または "Search in another Language" (検索ボックスの上) をクリックしてください
- 日本語で検索語の最初を入力すると、候補が表示されます。
- 新機能！日本語のフレーズ(句)による検索に対応します。

※カンマ (、,) や演算子 (and/orなど) は入れないでください
※英語入力→複数の単語を入れる時はスペースを空けてください

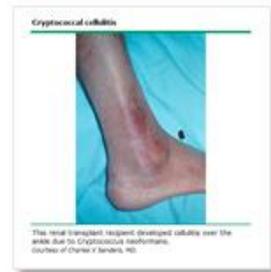
「画像」で絞りこみ検索すると、全てのトピック内の関連する図表をサムネイル形式で全て表示できます

蜂巣炎 (cellulitis) の検索結果
誤語の正しさを評価してください。

- 全てのトピック
- 成人
- 小児
- 患者向け
- 画像



Aeromonas cellulitis



Cryptococcal cellulitis



Auricular cellulitis



Cellulitis of the forearm



Fusarium toe cellulitis



Cellulitis with venous insufficiency



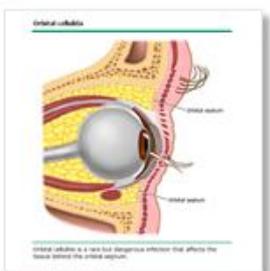
Postvenectomy cellulitis



Orbital cellulitis



Skin appearance in eosinophilic cellulitis (Wells syndrome)



Orbital cellulitis



Fusarium paranasal



Dissecting cellulitis of the



Dissecting cellulitis of the



Breast cellulitis after



Fusarium finger cellulitis

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Orbital cellulitis



This young girl has erythema and edema in the preseptal area, which could be caused by either orbital or preseptal infection.

Reproduced with permission from: Fleisher GR, Ludwig W, Baskin MN. Atlas of Pediatric Emergency Medicine. Philadelphia: Lippincott Williams & Wilkins, 2004. Copyright © 2004 Lippincott Williams & Wilkins.

Graphic 57604 Version 1646.0

APPEARS IN TOPICS:

Please view graphics in the context of the topic in which they appear below.

- Orbital cellulitis
- Preseptal cellulitis

画像をクリックすると
画像が掲載されている
トピックが全て表示され
クリックするとトピックに
ジャンプします

例題

「初発GIST(消化管間質腫瘍)で完全切除した患者に
アジュバントをするべきかどうかについて調べたい」

<キーワード>

1. GIST
2. 初発GIST アジュバント
3. 初発GISTにおけるアジュバント療法

1. GISTで検索

検索結果のトピックが検索後と
関連が強い順に日本語で表示されます

"gist (gist)"の検索結果

- 全てのトピック
- 成人
- 小児
- 患者向け
- 画像

- GISTを含む消化管間葉系腫瘍の疫学、分類、臨床像、予後の特徴、および診断方法
- 消化管間質腫瘍、平滑筋腫、および消化管の平滑筋肉腫の局所治療
- 消化管間質腫瘍に対する補助化学療法および術前補助化学療法としてのイマチニブ
- 進行消化管間質腫瘍に対するチロシンキナーゼ阻害剤療法
- メックル憩室
- 神経線維腫症型(NF1): マネージメントおよび予後
- 上部消化管の上皮下病変評価のための超音波内視鏡検査
- 分子標的薬である血管新生阻害剤の毒性: 心血管系への影響
- 分子標的薬である血管新生阻害剤の毒性: 心血管系以外への影響
- 小腸腫瘍の疫学、臨床的特徴、および種類
- 隆起性皮膚線維肉腫: 治療
- 小腸腫瘍の治療
- 転移性軟部組織肉腫の全身治療
- 神経線維腫症型(NF1): 病因、臨床的特徴、および診断
- 放射線関連肉腫
- 治療を目的とした超音波内視鏡
- 小児における褐色細胞腫
- 小腸腫瘍の診断および病期分類
- イマチニブ: 医薬品情報
- 転移性軟部肉腫に対する外科治療およびその他の局所療法
- 超音波内視鏡ガイド下での tru-cut針を使用した生検
- 腫瘍学の最新情報
- 消化器病学における臨床病理学的症例: 胃
- 食道の良性病変
- 軟部および骨肉腫の病原因子
- 消化管における超音波内視鏡ガイド下での穿刺吸引生検

トピック上にカーソルを合わせると、右側にトピックアウトラインが表示されます
⇒素早く見たいトピックを探することができます

トピックアウトライン

- INTRODUCTION
- ADJUVANT THERAPY
 - Estimation of recurrence risk
 - Benefit of imatinib
 - Phase II trials
 - Phase III trials
 - ACOSOG Z9001
 - EORTC 62024
 - SSG XVIII trial
 - Imatinib dosing
 - Patient selection
- NEOADJUVANT THERAPY
 - Benefit
 - RTOG 0132/ACRIN 6665 trial
 - Retrospective series
 - Rectal GISTs
 - Response assessment
 - Summary and recommendations of expert groups
 - Patients with metastatic disease
- POSTTREATMENT FOLLOW-UP
- INFORMATION FOR PATIENTS
- SUMMARY AND RECOMMENDATIONS
- GRAPHICS
- TABLES
 - GIST progn criteria
 - GIST progn site size mit
 - TNM staging GIST
 - Dis prog gastric GIST
 - Dis prog small int GIST
 - Mod NIH risk strat for GIST incl rupture
 - Risk aggressive behavior GIST

2. 初発GIST アジュバントで検索

新規検索 患者向け情報 最新情報 計算ツール CME 95.0 マイアカウント

初発GIST アジュバント (initial adjuvant gist)の検索結果
 訳語の正しさを評価してください。

ここに表示される英語表記でトピック検索をします
 ⇒検索語を変えると検索結果も変わってきます

● 全てのトピック

○ 成人

○ 小児

○ 患者向け

○ 画像 

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3. 初発GISTにおけるアジュバント療法で検索

新規検索 患者向け情報 最新情報 計算ツール CME 95.0 マイアカウント

初発GISTにおけるアジュバント療法 (the initial adjuvant therapy in gist) の検索結果
 訳語の正しさを評価してください。

文章で入力しても検索できるようになりました

● 全てのトピック

○ 成人

○ 小児

○ 患者向け

○ 画像 🖼️

- 消化管間質腫瘍、平滑筋腫、および消化管の平滑筋肉腫の局所治療
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掲載内容の項目一覧

Adjuvant and neoadjuvant imatinib for gastrointestinal stromal tumors

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Disclosures

All topics are updated as new evidence becomes available and our peer review process is complete.
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最終更新日

INTRODUCTION — Stromal or mesenchymal neoplasms that collectively consist of small intestine, but can occur in any part of the gastrointestinal tract. This group is comprised of a spectrum of tumors including liposarcomas, leiomyomas, true leiomyomas, and gastrointestinal stromal tumors (GISTs). The pathologic characterization of GISTs is based on the presence of one of two proto-oncogenes, KIT or PDGFRA, which represent the molecular hallmark of GISTs. These findings led to the development of imatinib. These agents block signaling pathways that lead to activation of the receptor. The end result is inhibition of tumor growth. Imatinib, the median survival for patients with advanced gastrointestinal stromal tumors. These agents in advanced disease agents in advanced disease agents in advanced disease with unresectable or borderline resectable tumor.

This topic review will cover the perioperative workup, and surgical treatment of localized disease. "Epidemiology, classification, clinical presentation, and diagnosis" and "Local treatment for gastrointestinal stromal tumors" and "Systemic therapy for advanced gastrointestinal stromal tumors".

ADJUVANT THERAPY — The standard of care for patients with completely resected, negative microscopic margins. Complete resection is possible in the majority of localized GISTs, but only about one-third remain recurrence-free for five or

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著者採用の条件

- 該当する分野のエキスパート
- 現在も患者を診ている
- 大学病院に所属している

Common group of mesenchymal neoplasms that collectively consist of small intestine, but can occur in any part of the gastrointestinal tract. This group is comprised of a spectrum of tumors including liposarcomas, leiomyomas, true leiomyomas, and gastrointestinal stromal tumors (GISTs). The pathologic characterization of GISTs is based on the presence of one of two proto-oncogenes, KIT or PDGFRA, which represent the molecular hallmark of GISTs. These findings led to the development of imatinib. These agents block signaling pathways that lead to activation of the receptor. The end result is inhibition of tumor growth. Imatinib, the median survival for patients with advanced gastrointestinal stromal tumors. These agents in advanced disease agents in advanced disease agents in advanced disease with unresectable or borderline resectable tumor.

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Contributor disclosures

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This policy last reviewed on June 11, 2012.

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Adjuvant and neoadjuvant imatinib for gastrointestinal stromal tumors

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SUMMARY AND RECOMMENDATIONS

- Gastrointestinal stromal tumors (GISTs) are common mesenchymal neoplasms that affect the GI tract.
- Approximately 80 percent of GISTs have mutations in the KIT protooncogene that lead to constitutive activation of KIT, a receptor tyrosine kinase

原発巣を完全切除した初発の高リスクGIST患者には1年ではなく少なくとも3年チロシンキナーゼ阻害剤（イマチニブ400mg/日）によるアジュバント治療を推奨します。

- We recommend adjuvant treatment with a tyrosine kinase inhibitor ([imatinib 400 mg daily](#)) for a minimum of three years rather than one year in patients who have a completely resected primary high-risk GIST ([Grade 1A](#)). (See '[SSG XVIII trial](#)' above.)

The optimal selection of patients who are at sufficiently high risk of disease recurrence to warrant adjuvant imatinib is not established. Although risk stratification tools are available, based upon tumor size, mitotic rate, location, and in some cases, the presence or absence of tumor rupture, it is not clear what cutoff for disease recurrence should be used to select patients for imatinib. (See '[Estimation of recurrence risk](#)' above.)

Thus, each case must be approached individually, balancing the estimated likelihood of a disease recurrence (based upon anatomic site, size, mitotic rate, and mutation type, if available) with the risks of therapy. Several risk stratification schema are available ([table 2](#) and [table 6](#)). In the SSGXVIII trial high-risk GISTs were defined as >10 cm, mitotic count >10/50 high-power fields (HPF), >5 cm with a mitotic rate >5/HPF, or a ruptured tumor.

高リスクGISTは腫瘍径>10cm、腫瘍細胞分裂像数> 10/50 HE染色切片強拡大（HPF）、腫瘍径> 5cmかつ分裂率> 5/HPFまたは腫瘍破裂と定義されています。

- For patients with nonmetastatic but locally advanced unresectable GIST, potentially resectable primary tumors but with the risk of significant morbidity, or potentially resectable metastatic GISTs, we suggest initial treatment with [imatinib](#) followed by attempted resection as long as there is no evidence of generalized progression ([Grade 2B](#)). We also suggest neoadjuvant imatinib rather than initial surgery for most patients with a rectal GIST ([Grade 2C](#)). If possible, such patients should be enrolled on a clinical trial. (See '[Neoadjuvant therapy](#)' above and '[Rectal GISTs](#)' above.)

The optimal duration of neoadjuvant imatinib is uncertain, and we individualize this decision based upon drug tolerance, tumor location and extent, and the urgency of surgical treatment.

- For patients with potentially resectable metastatic disease, aggressive cytoreductive surgery should be offered only to patients whose disease is stable or responding to TK inhibitor therapy, or who have only focal progression ([Grade 1B](#)). Patients with extensive disease progression while on TK inhibitor therapy gain little benefit from surgery, and it is not recommended. (See '[Local treatment for gastrointestinal stromal tumors, leiomyomas, and leiomyosarcomas of the gastrointestinal tract](#)', section on 'Role of surgery in patients with metastatic disease'.)

Cytoreductive surgery in this setting often requires extensive potentially morbid procedures such as gastrectomy, hepatectomy, pancreatic resection, and should be carried out in centers of excellence. All patients should resume therapy with a TK inhibitor after resection. (See '[Patients with](#)

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GradeとRecommendationについて

Grade 1A recommendation

A Grade 1A recommendation is a strong recommendation, and applies to most patients in most circumstances without reservation. Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present.

Explanation:

A Grade 1 recommendation is a strong recommendation. It means that we believe that if you follow the recommendation, you will be doing more good than harm for most, if not all of your patients.

Grade A means that the best estimates of the critical benefits and risks come from consistent data from well-performed, randomized, controlled trials or overwhelming data of some other form (eg, well-executed observational research is unlikely to have an impact on our confidence in the estimates of benefit and risk).

推奨のグレード

Recommendation grades

1. Strong recommendation: Benefits clearly outweigh the risks and burdens (or vice versa) for most, if not all, patients
2. Weak recommendation: Benefits and risks closely balanced and/or uncertain

Evidence grades

エビデンスのグレード

- A. High-quality evidence: Consistent data from well-performed, randomized, controlled trials or overwhelming evidence of some other form
- B. Moderate-quality evidence: Evidence from randomized trials with important limitations, or very strong evidence of some other form
- C. Low-quality evidence: Evidence from observational studies, unsystematic clinical observations, or from randomized trials with serious flaws

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推奨のグレード

- 1:強い推奨⇒‘Recommend（推奨する）’という表現を使用
- 2:弱い推奨⇒‘Suggest（提案する）’という表現を使用

エビデンスのグレード

- A:質の高いエビデンス・・・複数の精度の高いランダム化臨床試験（RCT）かその他の絶大なエビデンスがある場合など
- B:中程度のエビデンス・・・制約のあるRCTあるいはその他の強力なエビデンス
- C:質の低いエビデンス・・・観察研究や臨床的観察・重大な問題のあるRCT

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Disclosures

All topics are updated as new evidence becomes available and our [peer review process](#) is current through: Aug 2013. | This topic last updated: Jul 11, 2013.

INTRODUCTION — Stromal or mesenchymal neoplasms affecting the gastrointestinal (GI) consists of neoplasms that are collectively referred to as gastrointestinal stromal tumors (GISTs). GISTs are small intestine, but can occur in any portion of the alimentary tract, and occasionally in the colon. The group is comprised of a spectrum of tumors that are identical to those that might arise in the soft tissue, including liposarcomas, leiomyomas, true leiomyosarcomas, desmoid tumors, schwannomas, and plexiform neurofibrosarcomas.

The pathologic characterization of GIST as a unique form of GI sarcoma was first described by Heinrich et al in 1983. The discovery of one of two proto-oncogenes, KIT or platelet-derived growth factor receptor- α (PDGFR α), in GISTs represents the molecular hallmark of GISTs. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)".)

These findings led to the development of effective systemic therapies in the form of small molecule tyrosine kinase inhibitors (TKIs). These agents block signaling via KIT and PDGFR α by binding to the adenosine triphosphate (ATP) binding site of the receptor. The end result is inhibition of tumor proliferation. The effectiveness of imatinib was demonstrated in a phase III trial. The median survival of patients with advanced GIST increased from approximately 10 months to 20 months with the introduction of imatinib. (See "[Therapy for advanced gastrointestinal stromal tumors](#)".)

The success of these agents in advanced disease prompted interest in their perioperative use. This includes both preoperative or induction therapy for patients with unresectable or borderline resectable tumors, and adjuvant treatment for patients at high risk of recurrence after complete resection of a primary GIST tumor.

This topic review will cover the perioperative use of [imatinib](#) for localized GIST tumors. The epidemiology, classification, molecular pathogenesis, diagnostic workup, and surgical treatment of localized GISTs, and the use of TKIs in patients with unresectable or metastatic disease are covered elsewhere. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)" and "[Local treatment for gastrointestinal stromal tumors, leiomyomas, and leiomyosarcomas of the gastrointestinal tract](#)" and "[Tyrosine kinase inhibitor therapy for advanced gastrointestinal stromal tumors](#)".)

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消化管間質腫瘍に対するアジュバントと術前イマチニブ

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消化管間質腫瘍に対するアジュバントと術前イマチニブ

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開示

新たな証拠が利用可能になると私たちのように、すべてのトピックが更新されるピアレビュープロセスは完了です。
流れる電流文献レビュー: 2013年8月。| 最終更新このトピック: 2013年7月11日。

はじめに 胃腸(GI)管に影響を与える間質または間葉系腫瘍を2つのグループに分けられます。最も一般的なグループは、総称して消化管間質腫瘍(のGIST)と呼ばれている腫瘍で構成されています。彼らは最も頻りに胃および近位小腸に配置されていますが、消化管のどの部分で発生する可能性があり、時折大腸、腸間膜、そして腹膜た。はるかに少ない一般的なグループは、体の残りの部分(すなわち、脂肪腫、脂肪肉腫、平滑筋腫、平滑筋肉腫真、デスマイド腫瘍、神経鞘腫、および末梢神経を通じて軟部組織に発生する可能性のあるもの)と同一である腫瘍のスペクトルから構成されている鞘腫瘍)。

G肉腫のユニークな形としてGISTの病理学的特徴付けは、1983年に記載したところ、翌々の癌原遺伝子、KIT又は血小板由来増殖因子受容体α(PDGFRα)のいずれかの変異活性化は、刺激されたことが実証された癌細胞の増殖。これらの変異はGISTの分子特質を表しています。(参照"[GISTを含む消化管間葉系腫瘍の疫学、分類、臨床症状、予後機能、および診断作業アップ](#)".)

これらの知見は、プロトタイプとなっている小分子チロシンキナーゼ阻害剤(チロシンキナーゼ阻害)の形で効果的な全身療法の開発につながったイマチニブ。これらの薬剤は、受容体のリン酸化と活性化のために必要とアデニン三リン酸結合ポケットに結合することにより、KITとPDGFRαを介してシグナル伝達ブロック。最終結果は、腫瘍増殖の阻害である。これらの薬剤の有効性は、イマチニブの導入に伴い、高度なGIST患者の生存期間の中央値は約20~60ヶ月[から増加したという事実によって説明することができる]。(参照"[高度な消化管間質腫瘍のためにチロシンキナーゼ阻害剤療法を](#)".)

進行疾患におけるこれらの薬剤の成功は彼らの周術期の使用に関心を促した。これは、プライマリGIST腫瘍の完全切除後の再発リスクの高い患者のための術前または導入療法切除不能または境界切除腫瘍の患者のために、そして補助療法の両方が含まれます。

このトピックの見直しは、周術期の使用カバーするイマチニブローカライズGISTの腫瘍を。疫学、分類、分子病態、診断精密検査、およびローカライズのGISTの外科的治療、および切除不能または転移性疾患患者におけるチロシンキナーゼ阻害の使用は、他の場所で覆われています。(参照"[GISTを含む消化管間葉系腫瘍の疫学、分類、臨床症状、予後機能、および診断作業アップ](#)"と"[消化管間質腫瘍、平滑筋腫、および消化管の平滑筋肉腫のための局所治療](#)"と)のためのチロシンキナーゼ阻害剤療法先進的な消化管間質腫瘍。)

アジュバント療法 -プライマリ切除GIST患者に対する標準治療は、負の微視的なマージンと肉眼完全切除を目指し、手術です。完全切除は、ローカライズされたGISTの大部分で可能ですが、わずかに約半分は、5年以上無再発残る。(参照"[消化管間質腫瘍、平滑筋腫、および消化管の平滑筋肉腫のための局所治療](#)".)

再発リスクの推定 -おそれアジュバントの恩恵を受ける可能性の患者選択時にGISTの切除後の再発リスクの推定には、最も重要であるイマチニブを。いくつかの基準

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TI Long-term results of a randomized phase II trial of standard-versus higher-dose imatinib mesylate for patients with unresectable or metastatic gastrointestinal stromal tumors expressing KIT.

AU Blanke CD, Demetri GD, Fletcher CD, Heinrich MC, Flaherty KT, Blaylock M, Cote ML, Fletcher CD, Roberts PJ, Heinz D, Wehre E, Nikolova Z, Joensuu H
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PURPOSE: The overall survival of patients with advanced gastrointestinal stromal tumor (GIST) and treated long-term with imatinib mesylate is unknown. A previous report of a randomized phase II trial of standard-versus higher-dose imatinib mesylate for patients with unresectable or metastatic GIST showed high response rates at both the 400 and the 600 mg/d dose levels. We conducted a long-term analysis of patients enrolled on the trial, including patients followed during an extension phase, to evaluate survival, patterns of failure, and potential prognostic factors, including tumor mutational status.

PATIENTS AND METHODS: Patients with advanced GIST were enrolled onto an open-label, multicenter trial and were randomly assigned (1:1) to receive imatinib 400 versus 600 mg/d. Data were prospectively collected on KIT mutational status, total tumor area, and other potential prognostic factors. Patients were followed for a median of 63 months.

RESULTS: One hundred forty-seven patients were enrolled: 73 were in arm A (imatinib 400 mg/d), and 74 were in arm B (imatinib 600 mg/d). Response rates, median progression-free survival, and median overall survival were essentially identical on both arms, and median survival was 57 months for all patients. Forty-one patients overall (28%) remained on drug long-term. Female sex, the presence of an exon 11 mutation, and normal albumin and neutrophil levels were independently associated with better survival.

CONCLUSION: Nearly 50% of patients with advanced GIST who were treated with imatinib mesylate survived for more than 5 years, regardless of a 400 or 600 mg/d starting dose.

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Blanke CD, Demetri GD, von Mehren M, Heinrich MC, Eisenberg B, Fletcher JA, Corless CL, Fletcher CD, Roberts PJ, Heinz D, Wehre E, Nikolova Z, Joensuu H.

Oregon Health and Science University Cancer Center and Portland Veterans Affairs Hospital, Portland, OR, USA. blankek@ohsu.edu**Abstract**

PURPOSE: The outcome of patients diagnosed with advanced gastrointestinal stromal tumor (GIST) and treated long-term with imatinib mesylate is unknown. A previous report of a randomized phase II trial of imatinib mesylate in patients with incurable GIST detailed high response rates at both the 400 and the 600 mg/d dose levels. We conducted a long-term analysis of patients treated on the trial, including patients followed during an extension phase, to evaluate survival, patterns of failure, and potential prognostic factors, including tumor mutational status.

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Long-Term Results From a Randomized Phase II Trial of Standard- Versus Higher-Dose Imatinib Mesylate for Patients With Unresectable or Metastatic Gastrointestinal Stromal Tumors Expressing *KIT*

Charles D. Blanke, George D. Demetri, Margaret von Mehren, Michael C. Heinrich, Burton Eisenberg, Jonathan A. Fletcher, Christopher L. Corless, Christopher D.M. Fletcher, Peter J. Roberts, Daniela Heinz, Elisabeth Wehre, Zariana Nikolova and Heikki Joensuu

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Abstract

Purpose The outcome of patients diagnosed with advanced gastrointestinal stromal tumor (GIST) and treated long-term with imatinib mesylate is unknown. A previous report of a randomized phase II trial of imatinib mesylate in patients with incurable GIST detailed high response rates at both the 400 and the 600 mg/d dose levels. We conducted a long-term analysis of patients treated on the trial, including patients followed during an extension phase, to evaluate survival, patterns of failure, and potential prognostic factors, including tumor mutational status.

Patients and Methods Patients with advanced GIST were enrolled onto an open-label, multicenter trial and were randomly assigned (1:1) to receive imatinib 400

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INTRODUCTION — Stromal or mesenchymal neoplasms affecting the gastrointestinal (GI) tract are divided into two groups. The most common group consists of neoplasms that are collectively referred to as gastrointestinal stromal tumors (GISTs). They are most often located in the stomach and proximal small intestine, but can occur in any portion of the alimentary tract, and occasionally in the omentum, mesentery, and peritoneum. The far less common group is comprised of a spectrum of tumors that are identical to those that might arise in the soft tissues throughout the rest of the body (ie, lipomas, liposarcomas, leiomyomas, true leiomyosarcomas, desmoid tumors, schwannomas, and peripheral nerve sheath tumors).

The pathologic characterization of GIST as a unique form of GI sarcoma was first described in 1983, and it was later demonstrated that mutational activation of one of two proto-oncogenes, KIT or platelet-derived growth factor receptor-alpha (PDGFRA), stimulated the growth of the cancer cells. These mutations represent the molecular hallmark of GISTs. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)".)

These findings led to the development of effective systemic therapies in the form of small molecule tyrosine kinase inhibitors (TKIs), of which the prototype is [imatinib](#). These agents block signaling via KIT and PDGFRA by binding to the adenosine triphosphate-binding pocket required for phosphorylation and activation of the receptor. The end result is inhibition of tumor proliferation. The effectiveness of these agents can be illustrated by the fact that following the introduction of imatinib, the median survival of patients with advanced GIST increased from approximately 20 to 60 months [1]. (See "[Tyrosine kinase inhibitor therapy for advanced gastrointestinal stromal tumors](#)".)

The success of these agents in advanced disease prompted interest in their perioperative use. This includes both preoperative or induction therapy for patients with unresectable or borderline resectable tumors, and adjuvant treatment for patients at high risk of recurrence after complete resection of a primary GIST tumor.

This topic review will cover the perioperative use of [imatinib](#) for localized GIST tumors. The epidemiology, classification, molecular pathogenesis, diagnostic workup, and surgical treatment of localized GISTs, and the use of TKIs in patients with unresectable or metastatic disease are covered elsewhere. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)" and "[Local treatment for gastrointestinal stromal tumors, leiomyomas, and leiomyosarcomas of the gastrointestinal tract](#)" and "[Tyrosine kinase inhibitor therapy for advanced gastrointestinal stromal tumors](#)".)

ADJUVANT THERAPY — The standard of care for patients with a primary resectable GIST is surgery, aiming for a macroscopically complete resection with negative microscopic margins. Complete resection is possible in the majority of localized GISTs, but only about one-half remain recurrence-free for five or

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The success of these agents in advanced disease prompted interest in their perioperative use. This includes both preoperative or induction therapy for patients with unresectable or borderline resectable tumors, and adjuvant treatment for patients at high risk of recurrence after complete resection of a primary GIST tumor.

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Adjuvant and neoadjuvant imatinib for gastrointestinal stromal tumors

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Here are the patient education articles that are relevant to this topic. We encourage you to print or e-mail these topics to your patients. (You can also locate patient education articles on a variety of subjects by searching on "patient info" and the keyword(s) of interest.)

- Basics topics (see [Patient information: Soft tissue sarcoma \(The Basics\)](#))

- SUMMARY AND RECOMMENDATIONS**
- Gastrointestinal stromal tumors (GISTs) are common mesenchymal neoplasms that affect the GI tract.
 - Approximately 80 percent of GISTs have mutations in the KIT protooncogene that lead to constitutive activation of KIT, a receptor tyrosine kinase (RTK). A subset of GISTs lacking KIT gene mutations has activating mutations in a related RTK, platelet-derived growth factor receptor-alpha (PDGFRA). (See [Introduction](#) above.)
 - Small molecule tyrosine kinase inhibitors such as [imatinib](#) block signaling via KIT and PDGFRA, thus halting tumor proliferation. The success of these agents in advanced disease has prompted interest in perioperative use in patients with earlier stage disease.
 - We recommend adjuvant treatment with a tyrosine kinase inhibitor ([imatinib](#) 400 mg daily) for a minimum of three years rather than one year in patients who have a completely resected primary high-risk GIST ([Grade 1A](#)). (See [SSG XVIII trial](#) above.)

The optimal selection of patients who are at sufficiently high risk for recurrence to warrant adjuvant imatinib is not established. Although risk stratification tools are available, based upon tumor size, mitotic rate, location, and in some cases, the presence or absence of tumor rupture, it is not clear what cutoff for disease recurrence should be used to select patients for imatinib. (See [Estimation of recurrence risk](#) above.)

Thus, each case must be approached individually, balancing the estimated likelihood of a disease recurrence (based upon anatomic site, size, mitotic rate, and mutation type, if available) with the risks of therapy. Several risk stratification schema are available ([table 2](#) and [table 6](#)). In the SSGVIII trial, high-risk GISTs were defined as >10 cm, mitotic count >10/50 high-power fields (HPF), >5 cm with a mitotic rate >5/HPF, or a ruptured tumor.

If a known KIT exon 9 mutation is identified, higher dose imatinib may be considered, but there are no prospective data upon which to base a recommendation either for or against this practice. (See [Imatinib dosing](#) above and [Tyrosine kinase inhibitor therapy for advanced gastrointestinal stromal tumors](#), section on [Influence of mutations on response to therapy](#).)

- For patients with nonmetastatic but locally advanced unresectable GIST, potentially resectable primary tumors but with the risk of significant morbidity, or potentially resectable metastatic GISTs, we suggest initial treatment with [imatinib](#) followed by attempted resection as long as there is no evidence of generalized progression ([Grade 2B](#)). We also suggest neoadjuvant imatinib rather than initial surgery for most patients with a rectal GIST ([Grade 2C](#)). If possible, such patients should be enrolled on a clinical trial. (See [Neoadjuvant therapy](#) above and [Rectal GISTs](#) above.)

The optimal duration of neoadjuvant imatinib is uncertain, and we individualize this decision based upon drug tolerance, tumor location and extent, and

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Adjuvant and neoadjuvant imatinib for gastrointestinal stromal tumors

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 Chandrajit P Raut, MD, MSc

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INTRODUCTION — Stromal or mesenchymal neoplasms affecting the gastrointestinal (GI) tract are divided into two groups. The most common group consists of neoplasms that are collectively referred to as gastrointestinal stromal tumors (GISTs). They are most often located in the stomach and proximal small intestine, but can occur in any portion of the alimentary tract, and occasionally in the omentum, mesentery, and peritoneum. The far less common group is comprised of a spectrum of tumors that are identical to those that might arise in the soft tissues throughout the rest of the body (ie, lipomas, liposarcomas, leiomyomas, true leiomyosarcomas, desmoid tumors, schwannomas, and peripheral nerve sheath tumors).

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Estimation of recurrence risk — Estimation of recurrence risk following resection of a GIST is of paramount importance when selecting patients who could possibly benefit from adjuvant [imatinib](#). Several criteria have been proposed, originally to classify the malignant potential of a GIST. Although the terms "benign" and "malignant" are no longer applied to GIST, since all are considered to have malignant potential, tumor size, mitotic rate, and site of tumor origin have gained the greatest acceptance as being predictive of the risk of recurrence and/or metastases [2]. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)", section on 'Prognostic determinants'.)

Risk stratification models, such as the original NIH consensus criteria, have been proposed to distinguish prognosis in resected GIST ([table 1](#)) [3]. In the series of 289 patients used to construct this model, the cumulative five-year disease-specific survival rates for GISTs classified as risk level I through IV were 100, 86, 67, and 25 percent, respectively. (See "[Epidemiology, classification, clinical presentation, prognostic](#)"

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www.uptodate.com ©2013 UpToDate®**Adjuvant and neoadjuvant imatinib for gastrointestinal stromal tumors****Authors**George D Demetri, MD
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Chandrajit P Raut, MD, MSc**Section Editors**Kenneth K Tanabe, MD
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	>10	Any		>10	<5
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GIST: gastrointestinal stromal tumor.

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Models such as these do not take into account the location of the GIST. In general, tumors arising from the small bowel, colon, rectum, or mesentery are associated with less favorable outcomes than those arising from the stomach [4-6]. Other risk prediction models have taken location into account ([table 2](#)). As an example, largely based upon these data from the Armed Forces Institute of Pathology, which represent the largest published experience with GISTs diagnosed and treated in the modern era for which long-term clinical follow-up is available, a TNM (tumor-node-metastasis) staging system for GIST was developed by the American Joint Committee on Cancer (AJCC) and International Union Against Cancer (UICC), and published in the 2010 7th edition of the cancer staging manual ([table 3](#)) [7]. The T and N designations are similar for all disease sites, but there are separate stage groupings for gastric/omental, and for small bowel/esophageal/colorectal/mesenteric primaries. Rates of disease progression for gastric and small bowel GISTs, stratified by stage at diagnosis, are presented in the tables ([table 4](#) and [table 5](#)). (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)", section on 'Tumor size, mitotic rate, and location'.)

Although not included in the TNM staging system, tumor rupture [8] and incomplete resection are also independent risk factors that negatively impact disease-free survival. A modification of the NIH consensus criteria for risk stratification has been proposed that incorporates both site and tumor rupture as prognostic variables [9]. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal](#)

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Disclosures

All topics are updated as new evidence becomes available and our [peer review process](#) is complete. Literature review current through: Aug 2013. | This topic last updated: Jul 11, 2013.

INTRODUCTION — Stromal or mesenchymal neoplasms affecting the gastrointestinal (GI) tract are divided into two groups. The most common group consists of neoplasms that are collectively referred to as gastrointestinal stromal tumors (GISTs). They are most often located in the stomach and proximal small intestine, but can occur in any portion of the alimentary tract, and occasionally in the omentum, mesentery, and peritoneum. The far less common group is comprised of a spectrum of tumors that are identical to those that might arise in the soft tissues throughout the rest of the body (ie, lipomas, liposarcomas, leiomyomas, true leiomyosarcomas, desmoid tumors, schwannomas, and peripheral nerve sheath tumors).

The pathologic characterization of GIST as a unique form of GI sarcoma was first described in 1983, and it was later demonstrated that mutational activation of one of two proto-oncogenes, KIT or platelet-derived growth factor receptor-alpha (PDGFRA), stimulated the growth of the cancer cells. These mutations represent the molecular hallmark of GISTs. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)".)

These findings led to the development of effective systemic therapies in the form of small molecule tyrosine kinase inhibitors (TKIs), of which the prototype is [imatinib](#). These agents block signaling via KIT and PDGFRA by binding to the adenosine triphosphate-binding pocket required for phosphorylation and activation of the receptor. The end result is inhibition of tumor proliferation. The effectiveness of these agents can be illustrated by the fact that following the introduction of imatinib, the median survival of patients with advanced disease was approximately 20 to 60 months [1]. (See "[Tyrosine kinase inhibitor therapy for advanced gastrointestinal stromal tumors](#)".)

薬剤情報へのリンク

imatinib

The success of these agents in advanced disease has led to their use as preoperative or induction therapy for patients with unresectable or borderline resectable tumors, and as adjuvant treatment for patients at high risk of recurrence after complete resection of a primary GIST tumor.

This topic review will cover the perioperative use of [imatinib](#) for localized GIST tumors. The epidemiology, classification, molecular pathogenesis, diagnostic workup, and surgical treatment of localized GISTs, and the use of TKIs in patients with unresectable or metastatic disease are covered elsewhere. (See "[Epidemiology, classification, clinical presentation, prognostic features, and diagnostic work-up of gastrointestinal mesenchymal neoplasms including GIST](#)" and "[Local treatment for gastrointestinal stromal tumors, leiomyomas, and leiomyosarcomas of the gastrointestinal tract](#)" and "[Tyrosine kinase inhibitor therapy for advanced gastrointestinal stromal tumors](#)".)

ADJUVANT THERAPY — The standard of care for patients with a primary resectable GIST is surgery, aiming for a macroscopically complete resection with negative microscopic margins. Complete resection is possible in the majority of localized GISTs, but only about one-half remain recurrence-free for five or

Imatinib: Drug information

TOPIC OUTLINE

- Brand Names: U.S.
- Brand Names: Canada
- Pharmacologic Category
- Dosing: Adult
- Dosing: Pediatric
- Dosing: Geriatric
- Dosing: Renal Impairment
- Dosing: Hepatic Impairment
- Dosing: Adjustment for Toxicity
- Dosage Forms: U.S.
- Generic Equivalent Available: U.S.
- Administration
- Use
- Use - Unlabeled
- Medication Safety Issues
- Adverse Reactions Significant
- Contraindications
- Warnings/Precautions
- Metabolism/Transport Effects
- Drug Interactions
- Ethanol/Nutrition/Herb Interactions
- Pregnancy Risk Factor
- Pregnancy Implications
- Lactation
- Breast-Feeding Considerations
- Dietary Considerations
- Pricing: U.S. (Medi-Span®)
- Monitoring Parameters
- International Brand Names
- Mechanism of Action
- Pharmacodynamics/Kinetics

Imatinib: Drug information Lexicomp®

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(For additional information see "Imatinib: Patient drug information.")

For abbreviations and symbols that may be used in this monograph, see the "Abbreviations and Symbols" section.

Brand Names: U.S. Gleevec®

Brand Names: Canada Gleevec®

Pharmacologic Category Antineoplastic Agent, Tyrosine Kinase Inhibitor

Dosing: Adult **Note:** Treatment may be continued until disease progression or unacceptable toxicity. The optimal duration of therapy for chronic myeloid leukemia (CML) in complete remission is not yet determined. Discontinuing CML treatment is not recommended unless part of a clinical trial (Baccarani, 2009; NCCN CML guidelines v.3.2013).

Ph+ CML: Oral:

Chronic phase: 400 mg once daily; may be increased to 600 mg daily, if tolerated, for disease progression, lack of hematologic response after 3 months, lack of cytogenetic response after 6-12 months, or loss of previous hematologic or cytogenetic response; a range of up to 800 mg daily is included in the NCCN CML guidelines (v.3.2013).

Canadian labeling: 400 mg once daily; may be increased to 600-800 mg daily

Accelerated phase or blast crisis: 600 mg once daily; may be increased to 800 mg daily (400 mg twice daily), if tolerated, for disease progression, lack of hematologic response after 3 months, lack of cytogenetic response after 6-12 months, or loss of previous hematologic or cytogenetic response

Ph+ ALL (relapsed or refractory): Oral: 600 mg once daily

GIST (adjuvant treatment following complete resection): Oral: 400 mg once daily; recommended treatment duration: 3 years

GIST (unresectable and/or metastatic malignant): Oral: 400 mg once daily; may be increased up to 800 mg daily (400 mg twice daily), if tolerated, for disease progression. **Note:** Significant improvement (progression-free survival, objective response rate) was demonstrated in patients with KIT exon 9 mutation with 800 mg daily (400 mg twice daily) compared with 400 mg daily (200 mg twice daily) in a phase 3 trial.

添付文書情報そのままではなく、
臨床上重要な投与量・剤型・
相互作用・投与方法などを
まとめています

※日本で未承認の内容を含みます
ご注意ください

薬剤情報の検索方法-製品名での検索例

- ❖ 日本で販売されている医療用医薬品の製品名・一般名どちらでも検索可能です
- ❖ 後発品の製品名でも検索できます

新規検索: Search in [another language](#)

ステート ▼ 全てのトピック

- 🔍 新登場! 日本語検索機能 日本語または英語で検索して下さい
- 🔍 薬物相互作用

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製品名で入力した場合でも、
検索時には一般名で検索し
関連する単語も表示されます

"ステラント (sunitinib)"の検索結果
誤語の正しさを評価してください。

sunitinib 関連する語をクリックして下さい: [tyrosine kinase inhibitors](#), [vascular endothelial growth factor receptor inhibitors](#)

- 全てのトピック
- 成人
- 小児
- 患者向け
- 画像

- スニチニブ: 医薬品情報
- スニチニブ: 患者向け医薬品情報
- Lexi-Interact™ 薬物相互作用鑑別プログラム
- 転移性の胃腸管系神経内分泌腫瘍: 腫瘍増殖およびホルモン過剰分泌による症状を管理するための全身治療の選択肢
- 分子標的薬である血管新生阻害剤の毒性: 心血管系以外への影響
- 分子標的薬である血管新生阻害剤の毒性: 心血管系への影響
- 進行腎細胞癌に対する抗血管新生療法および分子標的療法
- 緩和ケア: 疲労、脱力および無力症の概要
- 傍神経節腫および褐色細胞腫: 悪性疾患のマネージメント
- 胸腺神経内分泌(カルチノイド)腫瘍
- 進行非小細胞肺癌に対する遺伝子型による個別治療
- 進行消化管間質腫瘍に対するチロシンキナーゼ阻害剤療法
- 気管支カルチノイド腫瘍: 治療および予後
- 上皮成長因子受容体(EGFR)阻害剤投与に続発するざ瘡様発疹
- 粘膜悪性黒色腫
- 分子標的剤およびその他の生物製剤を用いた癌治療による皮膚合併症
- 転移性膀胱癌の実験的全身療法
- 進行性肝細胞癌に対する全身治療
- 甲状腺髄様癌に対する化学療法および免疫療法
- 甲状腺分化癌に対する化学療法
- 化学療法関連腎毒性および腎不全患者における用量調整
- 抗腫瘍療法関連肺毒性: 分子標的剤

トピックアウトライン

- INTRODUCTION
- CLASSIFICATION, BIOLOGIC BEHAVIOR, AND IMPLICATIONS FOR TREATMENT
 - Overview of treatment options
- SOMATOSTATIN ANALOGS
 - Octreotide and other somatostatin analogs
 - Use in asymptomatic patients
 - Prevention and management of carcinoid crisis
- INTERFERON
- CYTOTOXIC CHEMOTHERAPY
 - Pancreatic NETs
 - Streptozocin combinations
 - Dacarbazine (DTIC) and temozolomide-based regimens
 - Oxaliplatin-containing regimens
 - Carcinoid tumors
 - Streptozocin combinations
 - Dacarbazine and temozolomide
 - Oxaliplatin-based regimens
 - Capecitabine plus bevacizumab
 - Summary
 - Poorly differentiated tumors
- MOLECULARLY TARGETED THERAPY
 - Pancreatic NET
 - Small molecule TK inhibitors
 - Sunitinib
 - Sorafenib and pazopanib
 - mTOR inhibitors
 - Everolimus
 - Temsirolimus

薬剤情報の検索方法-剤型が複数ある薬剤の例

新規検索:

Search in [another language](#)

リボスチン

▼ 全てのトピック



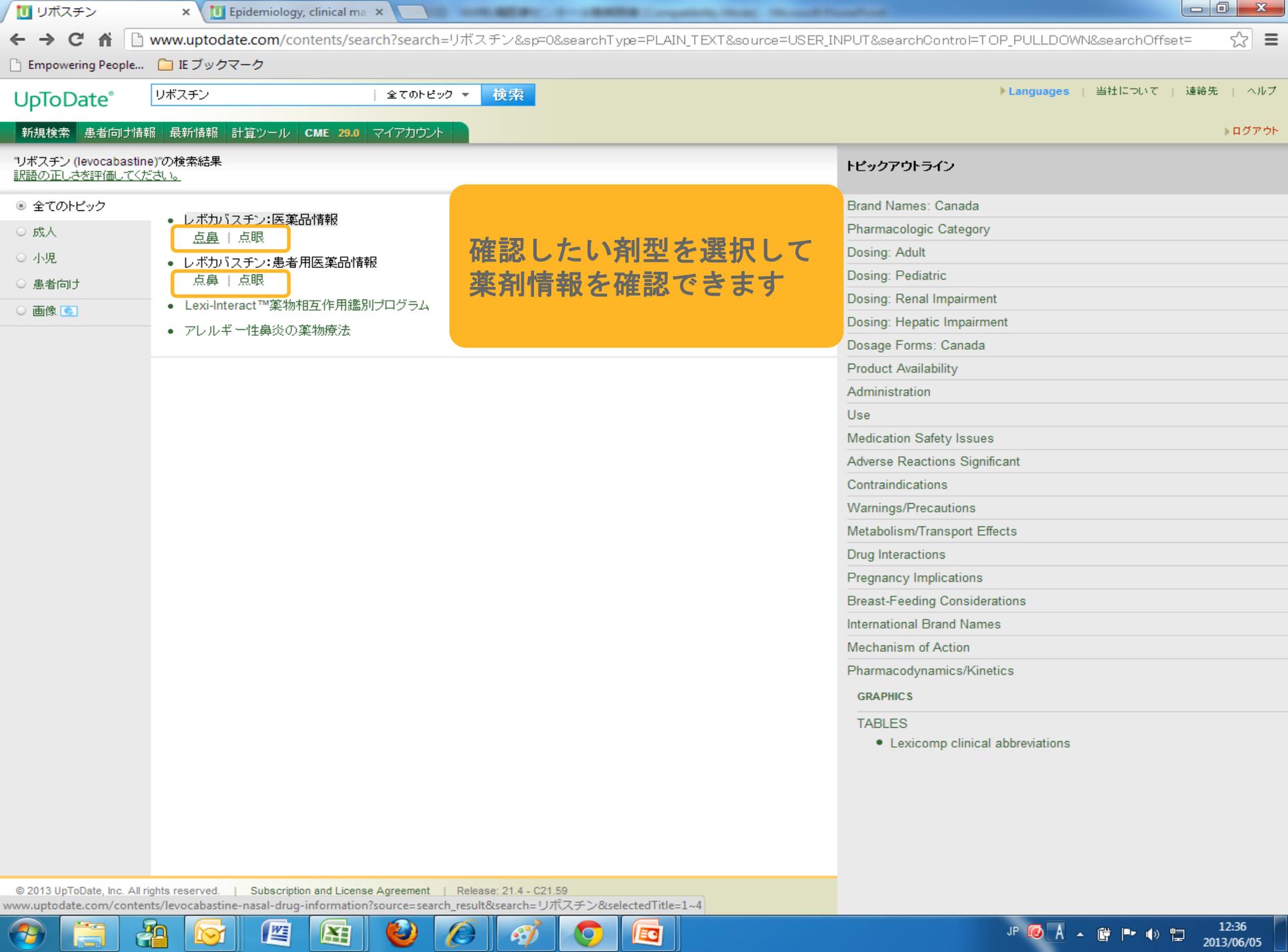
🔍 新登場！日本語検索機能 日本語または英語で検索して下さい

🔍 薬物相互作用

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いくつかの薬剤で剤型 (Drug Type) ごとに分類して薬剤情報が記載されるようになりました



レボカバステン (levocabastine) の検索結果
誤語の正しさを評価してください。

- 全てのトピック
- 成人
- 小児
- 患者向け
- 画像

- レボカバステン: 医薬品情報
 - 点鼻 | 点眼
- レボカバステン: 患者用医薬品情報
 - 点鼻 | 点眼
- Lexi-Interact™ 薬物相互作用鑑別プログラム
- アレルギー性鼻炎の薬物療法

確認したい剤型を選択して
薬剤情報を確認できます

トピックアウトライン

- Brand Names: Canada
- Pharmacologic Category
- Dosing: Adult
- Dosing: Pediatric
- Dosing: Renal Impairment
- Dosing: Hepatic Impairment
- Dosage Forms: Canada
- Product Availability
- Administration
- Use
- Medication Safety Issues
- Adverse Reactions Significant
- Contraindications
- Warnings/Precautions
- Metabolism/Transport Effects
- Drug Interactions
- Pregnancy Implications
- Breast-Feeding Considerations
- International Brand Names
- Mechanism of Action
- Pharmacodynamics/Kinetics

GRAPHICS

TABLES

- Lexicomp clinical abbreviations



その他の便利な機能：薬剤相互作用鑑別システム

新規検索:

Search in [another language](#)

日本語で検索

▼ 全てのトピック



🔔 新登場！日本語検索機能 日本語または英語で検索して下さい

🔍 薬物相互作用

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- 言語の設定を変更するには、"Languages" (右上側) または "Search in another Language" (検索ボックスの上) をクリックしてください
- 日本語で検索語の最初を入力すると、候補が表示されます。
- 新機能！日本語のフレーズ (句) による検索に対応します。

薬物相互作用 検索例：ワルファリン・緑茶・グレープフルーツジュースの相互作用

Lexicomp® Lexi-Interact™

Lookup

Enter item name to lookup.

↑

※英語のみ対応

“Warfarin”

“Green Tea”

“Grapefruit juice”

と一つずつ入力し
Lookupをクリック

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Lexi-Comp's Comprehensive Drug-to-Drug, Drug-to-Herb and Herb-to-Herb Interaction Analysis Program

NOTE: Lexi-Interact does not address chemical compatibility related to I.V. drug preparation or administration.

Lexi-Interact Online combines the world's literature and scientific understanding of drug interactions with a state-of-the-art electronic platform, providing an efficient way to ensure that adverse drug events don't compromise the care of your patients.

Review all interactions for a selected medication or enter a patient specific regimen to analyze for potential interactions. Additionally, you may select a drug interaction result to obtain detailed information on Patient Management, Interacting Members, Risk Rating, References and more.

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薬物相互作用 検索例：ワルファリン・緑茶・グレープフルーツジュースの相互作用

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Lookup

Enter item name to lookup.

Analyze

- [Grapefruit Juice](#)
- [Green Tea](#)
- [Warfarin](#)

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•Add another item(s) [Lookup] to Analyze for potential interactions between items in the list.

•Remove item from the list by clicking the check mark next to the item name.

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薬物相互作用 検索例：ワルファリン・緑茶・グレープフルーツジュースの相互作用

Lexicomp® Lexi-Interact™

Lookup

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Analyze New List

[Grapefruit Juice](#)

[Green Tea](#)

[Warfarin](#)

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- Add another item(s) [Lookup] to Analyze for potential interactions between items in the list.
- Remove item from the list by clicking the check mark next to the item name.

Lexi-Comp Online™ Interaction Analysis

[Customize Analysis](#)

Only interactions at or above the selected [risk rating](#) will be displayed. A:

View interaction detail by clicking on link.

Grapefruit Juice

No interactions identified with others in the selection list.

Green Tea

[C] [Warfarin](#) (Warfarin)

Warfarin

[C] [Green Tea](#) (Green Tea)

Date May 22, 2013

Disclaimer Readers are advised that decisions regarding drug therapy must be based on the independent judgment of the clinician, changing information about a drug (eg, as reflected in the literature and manufacturer's most current product information), and changing medical practices.

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確認したい相互作用の詳細は成分名をクリックすると表示されます

薬物相互作用は5段階でリスク分類をしています

Risk Rating: Rapid indicator regarding how to respond to the interaction data. Each Interact monograph is assigned a risk rating of A, B, C, D, or X. The progression from A to X is accompanied by increased urgency for responding to the data. In general, A and B monographs are of academic, but not clinical concern. Monographs rated C, D, or X always require the user's attention. The text of the Patient Management section of the monographs will provide assistance regarding the types of actions that could be taken. The definition of each risk rating is as follows:

Risk Rating	Action	Description
A	<i>No Known Interaction</i>	Data have not demonstrated either pharmacodynamic or pharmacokinetic interactions between the specified agents
B	<i>No Action Needed</i>	Data demonstrate that the specified agents may interact with each other, but there is little to no evidence of clinical concern resulting from their concomitant use.
C	<i>Monitor Therapy</i>	Data demonstrate that the specified agents may interact with each other in a clinically significant manner. The benefits of concomitant use of these two medications usually outweigh the risks. An appropriate monitoring plan should be implemented to identify potential negative effects. Dosage adjustments of one or both agents may be needed in a minority of patients.
D	<i>Consider Therapy Modification</i>	Data demonstrate that the two medications may interact with each other in a clinically significant manner. A patient-specific assessment must be conducted to determine whether the benefits of concomitant therapy outweigh the risks. Specific actions must be taken in order to realize the benefits and/or minimize the toxicity resulting from concomitant use of the agents. These actions may include aggressive monitoring, empiric dosage changes, choosing alternative agents.
X	<i>Avoid Combination</i>	Data demonstrate that the specified agents may interact with each other in a clinically significant manner. The risks associated with concomitant use of these agents usually outweigh the benefits. These agents are generally considered contraindicated.

薬物相互作用 検索例：ワルファリン・緑茶・グレープフルーツジュースの相互作用

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Lexi-Comp Online™ Interaction Monograph

Lookup

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Title Vitamin K Antagonists / Green Tea

Risk Rating C: Monitor therapy

Summary Green Tea may enhance the adverse/toxic effect of Vitamin K Antagonists. Particularly, the risk of bleeding may be increased due to possible antiplatelet effects of green tea. Green Tea may diminish the anticoagulant effect of Vitamin K Antagonists. **Severity** Moderate **Reliability Rating** Fair

Patient Management Advise patients to report green tea consumption, and monitor vitamin K antagonist (e.g., warfarin) response particularly closely in those patients who regularly consume green tea (especially larger quantities) and in those patients who have recently started or stopped consuming green tea.

Drug Members Acenocoumarol; Warfarin

...being treated with warfarin experienced a substantial decrease in his INR (from 3.2-3.8 to 1.1-1.4) that ...ular consumption of 1/2 to 1 gallon/day of green tea.¹ Though green tea leaves reportedly contain ...pproximately 10 times more vitamin K than black tea (1428mcg vs. 262mcg per 100g leaves),^{2,3} the vitamin K content of brewed green tea is relatively low (0.03mcg/100g brewed tea), but may vary according to strength and brewing methods.⁴

Conversely, animal and in vitro data suggest that green tea constituents may have antiplatelet properties.⁵ Also, epidemiologic studies have found evidence of an inverse association between green tea consumption and the risk of stroke,^{6,7} providing possible additional support for an antiplatelet effect of green tea.

Based on this relatively limited amount of data, it is difficult to predict the degree to which green tea consumption would impact vitamin K antagonist (or other anticoagulant/antiplatelet) therapy, as well as whether the impact would be antagonistic or additive/synergistic. However, it would seem prudent to advise patients to report green tea consumption and monitor vitamin K antagonist response particularly closely in those patients who regularly consume green tea (especially larger quantities) and in those patients who have recently started or stopped consuming green tea.

Footnotes

1. Taylor JR, Wilt VM, "Probable Antagonism of Warfarin by Green Tea," *Ann Pharmacother*, 1999, 33(4):426-8.
2. Booth SL, Sadowski JA, Pennington JAT, "Phylloquinone (Vitamin K1) Content of Foods in the US Food and Drug Administration's Total Diet Study," *J Agric Food Chem*, 1995, 43:1574-9.
3. Booth SL, Sadowski JA, Pennington JAT, "Vitamin K1 (Phylloquinone) Content of Foods: a Provisional Table," *J Food Comp Anal*, 1993, 6:109-20.
4. Booth SL, Madabushi HT, Davidson KW, "Tea and Coffee Brews are Not Significant Dietary Sources of Vitamin K1 (Phylloquinone)," *J Agric Food Chem*, 1995, 43:222-6.

Analyze New List

Grapefruit Juice

Green Tea

Warfarin

• Display complete list of interactions for an individual item by clicking item name

• Add

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• Re

• th

ワルファリンと相互作用がある成分を
全て検索したい場合はここをクリック

薬物相互作用 検索例:ワルファリンの相互作用

Lexi-Comp Online™ Interaction Lookup

Lexicomp® Lexi-Interact™

Lookup

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Analyze

New List

[Grapefruit Juice](#)

[Green Tea](#)

[Warfarin](#)

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•Remove item from the list by clicking the check mark next to the item name.

Only interactions at or above the selected [risk rating](#) will be displayed.

View interaction detail by clicking on link.



Warfarin

Interacting Categories

- [B] [5-ASA Derivatives](#)
- [C] [Acetaminophen](#)
- [C] [Adalimumab](#)
- [C] [Agents with Antiplatelet Properties](#)
- [D] [Allopurinol](#)
- [D] [Aminoglutethimide](#)
- [D] [Amiodarone](#)
- [D] [Androgens](#)
- [A] [Antacids](#)
- [C] [Anticoagulants](#)
- [C] [Antineoplastic Agents](#)
- [D] [Antithyroid Agents](#)
- [X] [Apixaban](#)
- [C] [Aprepitant](#)
- [C] [Atazanavir](#)
- [A] [AtorvaSTATin](#)
- [C] [AzaTHIOprine](#)
- [D] [Barbiturates](#)
- [C] [Bicalutamide](#)
- [C] [Bile Acid Sequestrants](#)
- [C] [Boceprevir](#)
- [C] [Bosentan](#)
- [D] [Capecitabine](#)
- [D] [CarBAMazepine](#)
- [C] [Cephalosporins](#)
- [C] [Chloral Hydrate](#)
- [C] [Chloramphenicol](#)
- [D] [Cimetidine](#)
- [D] [Clopidogrel](#)
- [C] [Cloxacillin](#)
- [C] [Cobicistat](#)

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Analyze New List

- [Grapefruit Juice](#)
- [Green Tea](#)
- [Warfarin](#)

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•Remove item from the list by clicking the check mark next to the item name.

Lexi-Comp Online™ Interaction Lookup

Only interactions at or above the selected [risk rating](#) will be displayed.

X: ▾

View interaction detail by clicking on link.

Warfarin

Interacting Categories

- [X] [Apixaban](#)
- [X] [Dabigatran Etexilate](#)
- [X] [Enzalutamide](#)
- [X] [Rivaroxaban](#)
- [X] [Tamoxifen](#)

併用禁忌の成分のみ
表示されます

Date May 22, 2013

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