

Guidelines for Improved Search Engine Rankings

Search Engine Optimization Guide for Content Authors

The purpose of this guide is to provide a process that can be used to create URMC Web site pages that rank well on search engine sites for a targeted set of keyword phrases. The guide is designed for content authors writing for the www.urmc.rochester.edu Web site.

Note: We will refer to Google throughout this document for simplicity, but all of these points apply to other major search engines such as Bing and Yahoo!.

Understanding Search Results

Google's primary revenue source is from advertising that is integrated with their **search results pages**. Paid Search Advertising allows Web site owners to place text ads around the natural (sometimes called organic) search results. In Figure 1, the paid search advertisements appear above the natural search results and in the right sidebar. **This document addresses the non-paid, natural search results only.** (Paid Search Advertising services are available, though, from the URMC Marketing Group.)

There are over one hundred factors that Google uses to compare pages and determine what natural search ranking position each should have for every search query entered. For the sake of simplicity, we will focus on the two most important factors: **text content** of Web pages and **links that point from one page to another**.

It is also important to realize that rankings are not absolute. More and more, Google is using information that it knows about you (your physical location based on your network properties, your previous searches and clicks, etc.) to **personalize search results**. So, the same search query performed by two users may not produce identical natural search results. But, if the best practices outlined in this document are followed, you should be able to improve the average rankings for the search phrases you're targeting.



Figure 1: Paid vs. Non-Paid Search Results

The Importance of Content

It can't be overstated how important it is to have **content related to the search phrases** for which you want to rank well. In Figure 2, a single mention of the keyword phrase "bradycardia" in a list of heart conditions is insufficient for that page to rank. An in-depth page devoted to bradycardia ("Better" in Figure 2) has much stronger ranking potential. A group of interlinked pages whose topics reflect likely search phrases ("what is bradycardia?," "bradycardia symptoms," "bradycardia treatments") have the best potential for search results success.

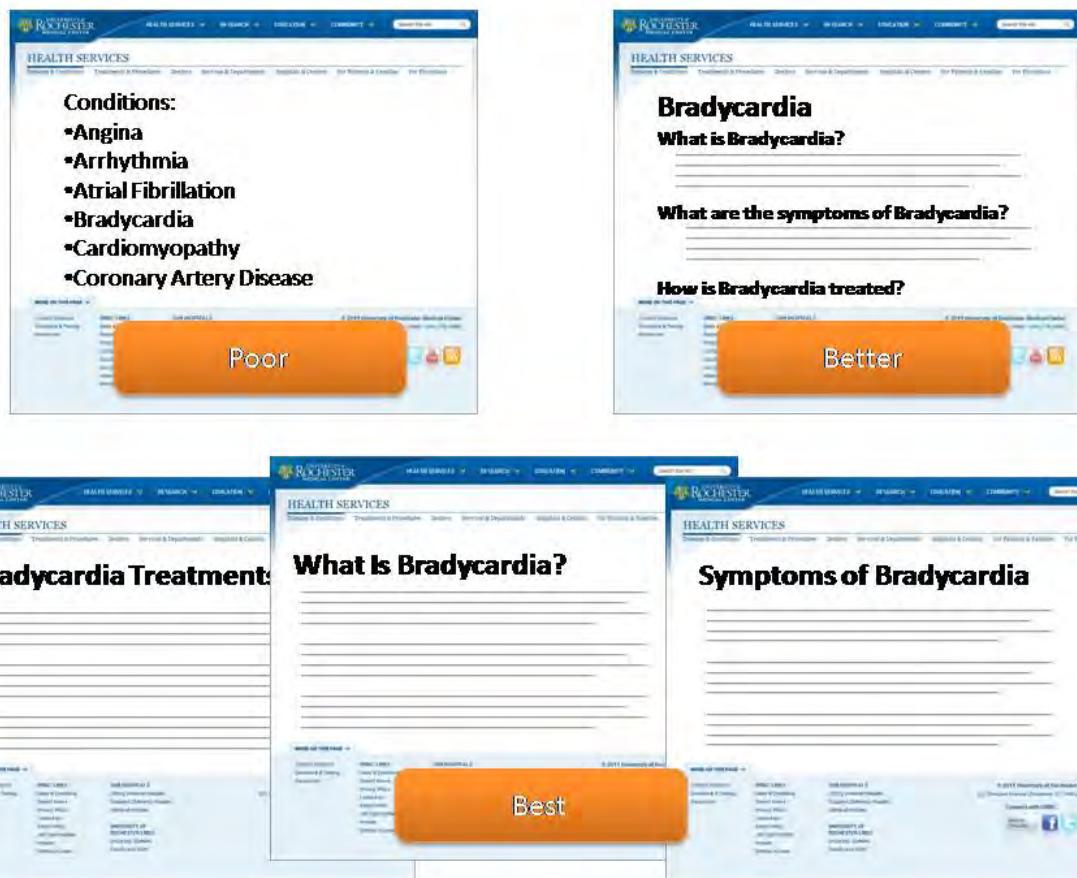


Figure 2: Content Example

The Influence of Links

It's easy to understand that the more content you have the better the odds are of ranking for a keyword or phrase. The importance of links, though, is not so obvious.

One of the fundamental differences between Google, when it launched in the late nineties, and other search engines of its day was that it used a "**citation model**" – like that used for research papers – counting the links between Web sites. In the same way that the research paper with the most citations tends to be the most seminal of the published papers, the Google algorithm looks at the links into Web sites as a measure of their importance, or authority value. The Google designers chose these "**external links**" as a key factor because (1) webmasters could not easily manipulate links originating on someone

else's site, and (2) links represent a kind of popularity vote for Web sites. The theory is that if the site contains something worthwhile, people will link to it. Both the number of and **quality** of links are measured, where quality of a link is based on the authority value that Google calculates for each page. Links from Harvard.edu or NYTimes.com carry more weight than those from smaller, lesser known sites, as represented in Figure 3.

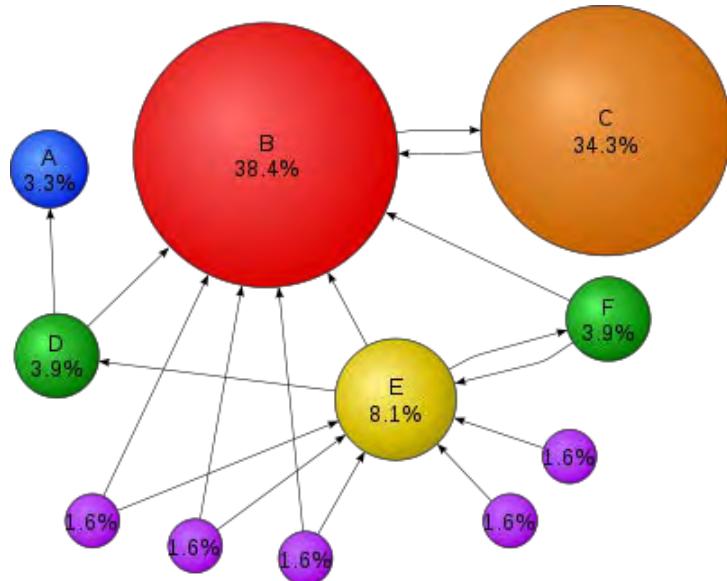


Figure 3: Graphical Representation of Web Site Importance vs. Links

The Google algorithm also factors in the links that go from page to page **within a site**. Internal links do not have as much influence on rankings as external links do, but they can still be an important element for improving rankings.

Optimizing a Page

Step 1: Keyword Targeting

Before creating or updating a page, it is helpful to gather some information about potential keyword phrases to target. Google provides a keyword tool for just that purpose, which can be found here:

<https://adwords.google.com/select/KeywordToolExternal>

The Google Keyword Tool will suggest a list of related keyword phrases to the phrase you enter into it. For each result, the tool shows a bar graphic indicating how competitive the phrase is, along with the estimated number of Global and Local monthly searches ("local" refers to the geography you define in the tool settings, which is "United States" in Figure 4).

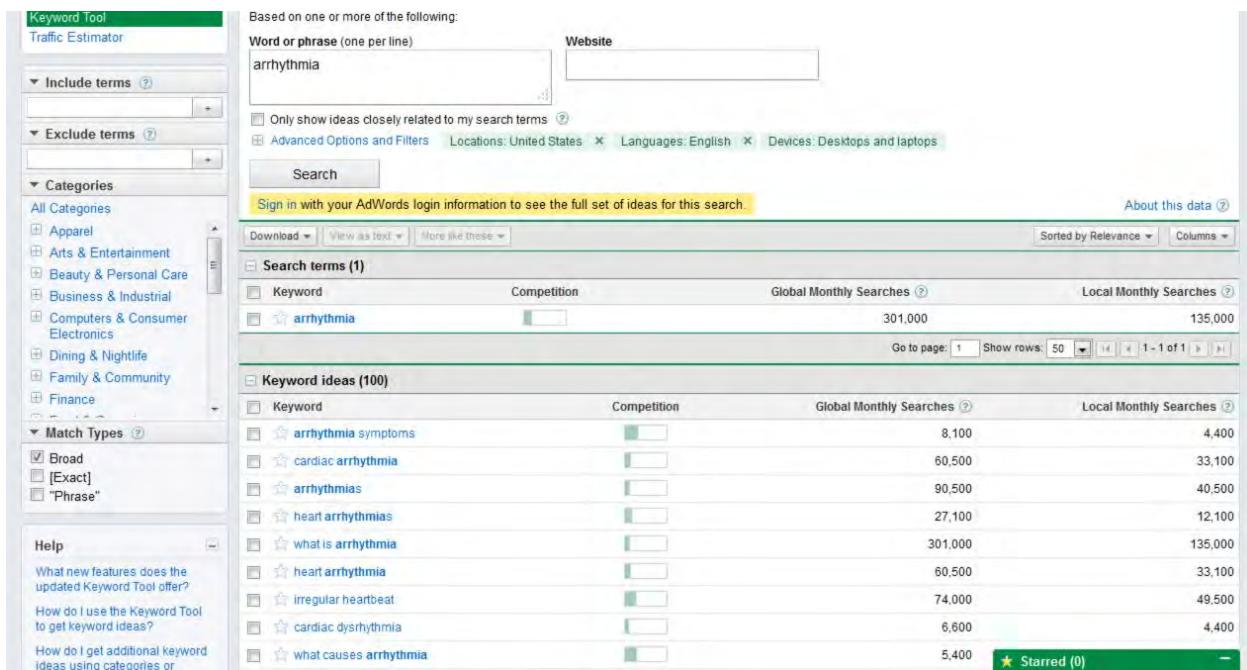


Figure 4: Google Keyword Tool (for the phrase “arrhythmia”)

For a single page, you might consider targeting **three or fewer keyword phrases**. Some basic guidelines for selecting target phrases are:

- Don't just pick the most competitive or high-volume terms. Consider lower-volume terms that might be better targeted for us. For example, a phrase like “pediatric arrhythmia” may have fewer monthly searches than many other terms, but if that's a specialty of ours, we should choose that phrase.
- Don't avoid terms that you think might be awkward to fit into the page copy. As we will see later, the copy **does not need to contain numerous exact instances** of the target phrase in order to be well optimized.

A note about **geographically qualified keyword phrases**: Many of the URMC services draw from a mostly local patient base. In those cases, consider geo-centric variants of the keyword tool suggestions as target phrases (“pediatrician Rochester NY”) because that's more likely to match how people search for those services.

In Figure 4, the target phrase “arrhythmia” produces a list of 100 suggested terms from the keyword tool. For the sake of this example, our target phrases will be:

- Arrhythmia
- Arrhythmia treatment
- Arrhythmia symptoms

Step 2: Page Properties

Page Metadata

The first optimization task is to set the page metadata properties (Figure 5):

- Page Title
- Page Description
- Page Keywords

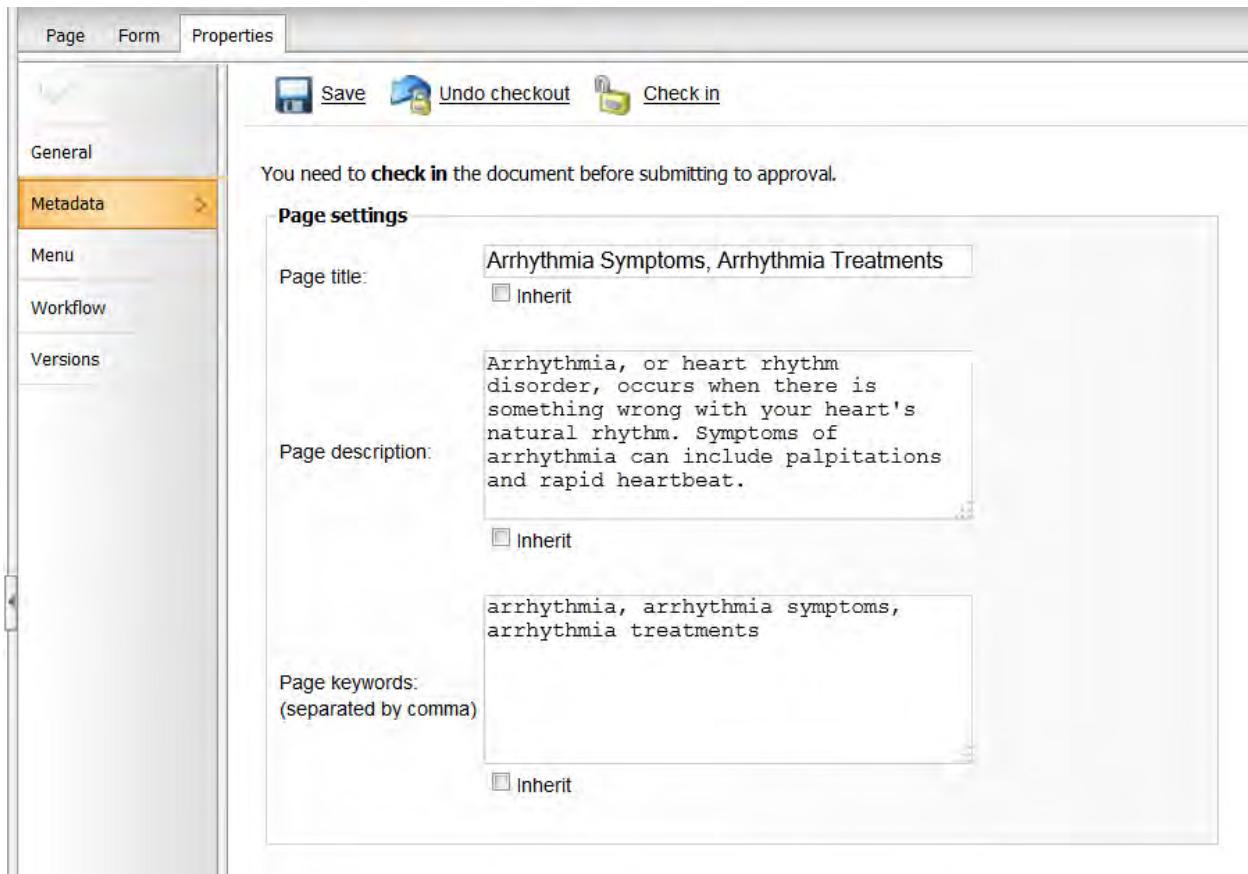


Figure 5: Editing the Page Properties, Metadata Information in Kentico CMS

The **Page Title** is the most important of these elements. Title tags appear in the header area of users' browsers, and they are generally the text that search engines show as a title link in search results pages (Figure 6).

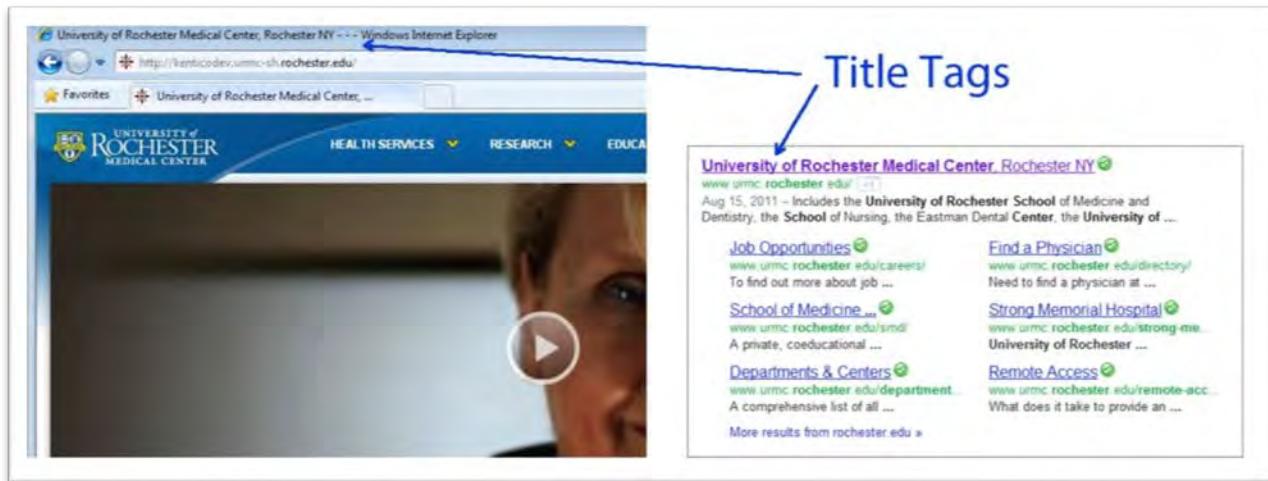


Figure 6: Title Tags in Page Headers and Search Results

General guidelines for writing Title tags:

1. The phrases should be ordered from **most specific to least specific**. Examples:

Foot and Ankle - URMC Orthopaedics and Rehabilitation – University of Rochester Medical Center (**Note:** “University of Rochester Medical Center” will be automatically appended to the end of your page titles, which you will see when your page is published.)

High Blood Pressure (Hypertension) - Department of Cardiology - Rochester, NY - University of Rochester Medical Center

2. “Rochester, NY” can be added for pages that appeal to a largely local target audience (second example above)
3. Make the title tag as specific as possible relative to the content of the page.
4. Ensure that your title tag is unique for each page.
5. The most important keywords should be in the first 70 characters; the overall length of the title tag should be less than 120 characters.

The **Page Description** is important to populate as well. It does not have the same importance as the title tag does, but search engines sometimes use elements of the page description in the **snippet** shown in search results (Figure 7), although most often the snippet is derived from the body copy on the page. Page descriptions should be one to three sentences in length.

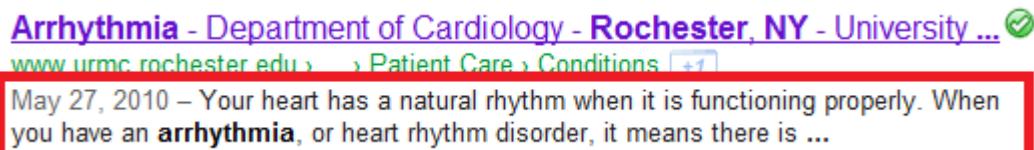


Figure 7: Snippet (outlined) in Search Results Page

If used, the **Page Keywords** field should be populated with the same keywords you selected at the beginning of the process. The keywords field of a page has **little to no importance** when it comes to search rankings. It is a common misperception that the keywords metatag is a significant ranking factor.

Step 3: Page Content

In Step 1 we selected target keywords for our page. In Step 2 we set up the page properties to be reflective of our chosen keywords. The next step is to optimize the page copy.

Here are some guidelines for search engine-friendly copywriting:

- Good copywriting prevails over keyword “stuffing.” Don’t feel that it’s necessary to repeat your exact keyword phrase over and over on the page — that will look to Google like an “over-optimized” page. Variants of phrases are not only more natural but also search engine-friendly: “treatments for arrhythmia,” “treating arrhythmia,” “The most common symptom,” “symptomatic,” etc.
- Use **headings** and **subheadings** where appropriate throughout the page (Figure 8). In general, elements that are **visually emphasized** will be treated as more important by search engines.

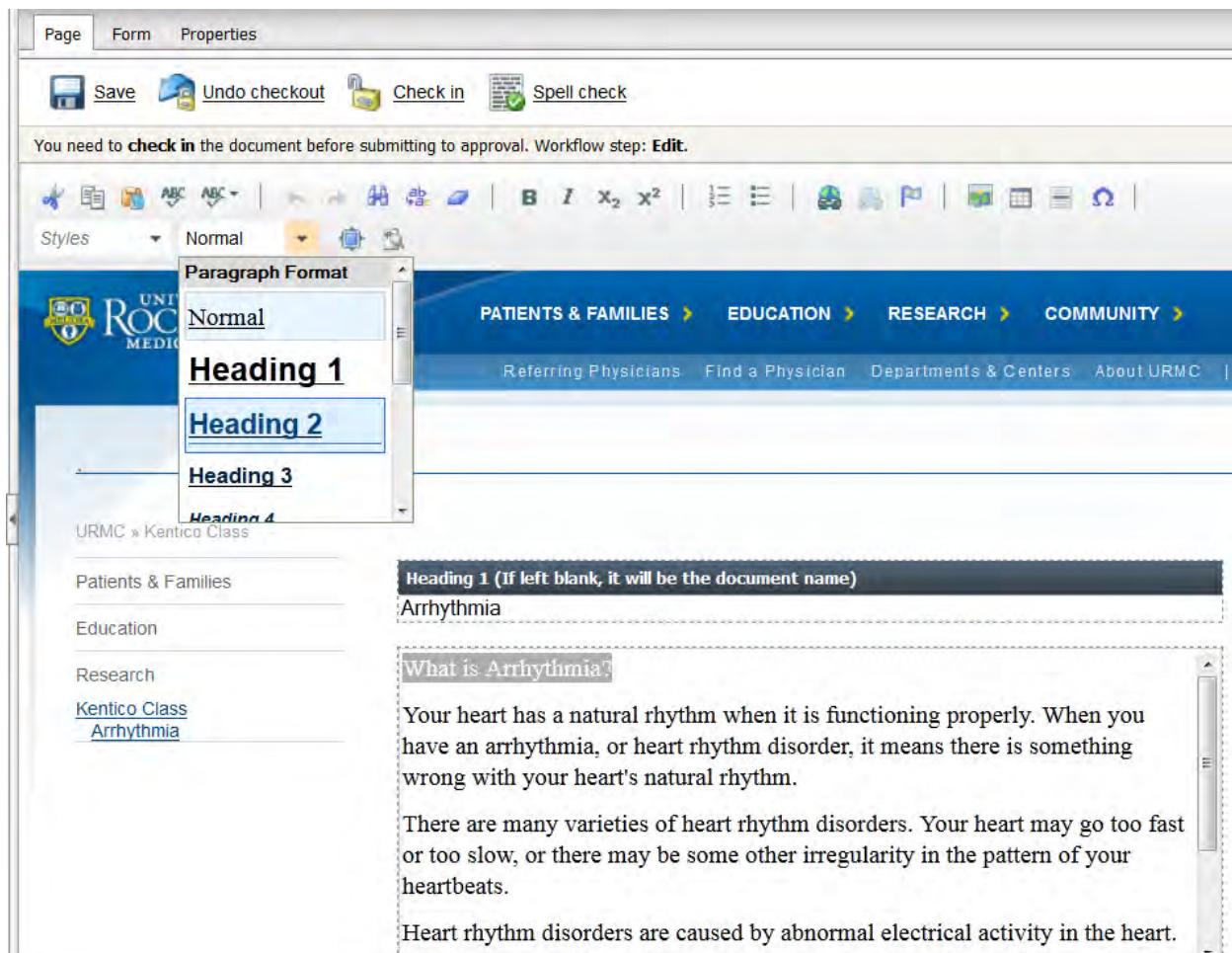


Figure 8: Using Heading and Subheading Styles in Kentico CMS

- Use **bold** and **italic** styles to emphasize keyword phrases. As noted above, if it's visually emphasized it will be given more emphasis by the search engines. Don't overuse this technique, though. If everything is bolded then it will all be given the same emphasis.
- If appropriate, add geographic relevance to the page copy: "...cardiologists serving the Greater Rochester, NY metro area..."
- Content near the **beginning of the page** will be given greater emphasis.
- All images inserted onto the page should have the required **Alternate Text** field filled in (Figure 9).

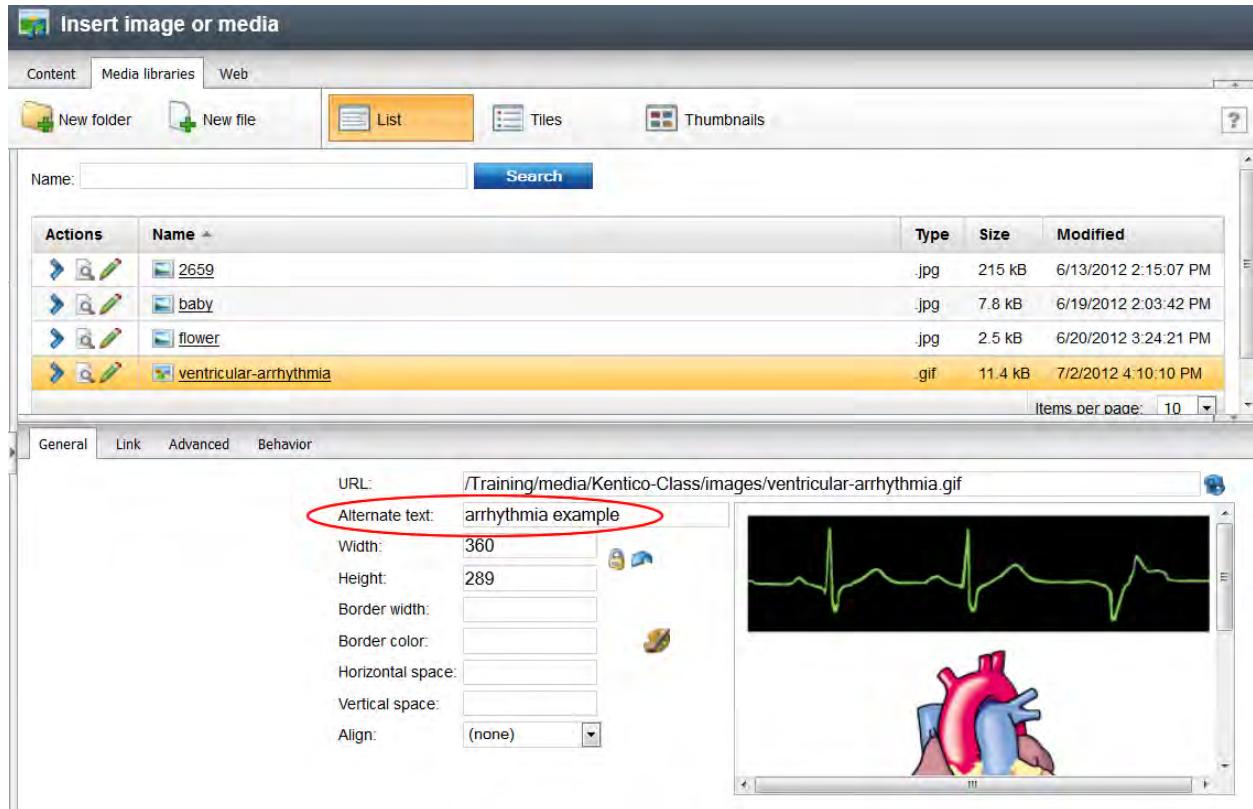


Figure 9: Image Alternate Text from the Kentico Insert Image or Media Dialog

Figure 10 shows an example of a completed page, with instances of our keywords highlighted.

UNIVERSITY of
ROCHESTER
MEDICAL CENTER

HEALTH SERVICES ▾ RESEARCH ▾ EDUCATION ▾ COMMUNITY ▾

Search this site 

URMC ▶ Test ▶ arrhythmias

Arrhythmia: Symptoms and Treatments

What are arrhythmias?
 Your heart has a natural rhythm when it is functioning properly. When you have an **arrhythmia**, or heart rhythm disorder, it means there is something wrong with your heart's natural rhythm.

There are many varieties of heart rhythm disorders. Your heart may go too fast or too slow, or there may be some other irregularity in the pattern of your heartbeats. **Arrhythmia** and other heart rhythm disorders are caused by **abnormal electrical activity** in the heart.

What are the symptoms of arrhythmias?
 Some **arrhythmias** are life-threatening medical emergencies that can result in cardiac arrest and sudden death. Others cause **symptoms** such as an abnormal awareness of heart beat (palpitations), and may be merely annoying. There can be many different **symptoms** associated with **arrhythmia**, and not all **arrhythmias** are accompanied by **symptoms**. You may experience some of these **symptoms**:

- » Palpitations
- » Rapid heartbeat
- » Feeling that your heart skips beats
- » Fainting
- » Dizziness
- » Lightheadedness
- » Shortness of breath
- » Discomfort in your chest
- » Fatigue or weakness

How are arrhythmias treated?
 The method of cardiac rhythm management depends firstly on whether or not the affected person is stable or unstable. Treatments may include physical maneuvers, medications, electricity conversion, or electro or cryo cauter. **Arrhythmia** treatment options include:

Remote Monitoring. Advanced technologies help us to monitor your heart's activity while you go about your daily activities.

Medication. For many patients, medications may be all that is required to control **arrhythmias**.

Atrial Fibrillation Ablation. In an ablation, a thin catheter is threaded through a blood vessel in the thigh and up to the heart. Abnormal electrical activity in the heart is blocked, or "ablated" with high-frequency electrical energy. After ablation, many patients never experience **arrhythmia symptoms** again.

Implantable Cardiac Defibrillators. Certain heart rhythm disorders put patients at risk of their hearts suddenly stopping. An implantable defibrillator can reset the heart's rhythm should this happen.

Ventricular Tachycardia Ablation. Patients who suffer from fast heartbeats that cannot be managed with medication can often be helped through VT ablation.

Pacemakers. If you suffer from bradycardia, or a heartbeat that is too slow, a pacemaker may be used to help your heart maintain a normal heart rate.

MORE ON THIS PAGE ▾

Contact Numbers	URMC LINKS	OUR HOSPITALS	© 2011 University of Rochester Medical Center 801 Elmwood Avenue Rochester, NY 14642 (585) 275-URMC
Directions & Parking	Maps & Directions	Strong Memorial Hospital	
Newsroom	Recent News	Golisano Children's Hospital	
	Privacy Policy	Highland Hospital	
	Contact Us		
	About URMC	UNIVERSITY OF	Connect with URMC:
	Job Opportunities	ROCHESTER LINKS	website feedback    
	Intranet	University Website	
	Remote Access	Faculty and Staff	

Figure 10: Example Page Copy

Page Linking

Link Text

Links from other URMC pages to our new page, as well as links from outside the URMC site, will **increase the importance** of a page. In either case, the **link text** is an important element to implement correctly.

For example, consider these two links to our new page as they might appear on another URMC Web page:

- 1) To learn more about arrhythmia treatments and symptoms, [click here](#).
- 2) Learn more about the [symptoms of and treatment for arrhythmia](#).

The link text in Version 1 is “click here,” which is not effective nor is it friendly to screen reader software for visually impaired users. The link text should describe to the user, and the search engine, what the destination page is about. Search engines will associate the words in the link text with the destination page. Obviously, Version 2 is a better implementation. It uses target keywords for the linked-to page and the link text accurately describes the content in the page that the link points to.

In Figure 11, the Heart Conditions page links to the Arrhythmia main page with the link text “Arrhythmia.” The Arrhythmia page links to the Symptoms and Treatments page with the link text “symptoms of and treatment for arrhythmia.” In both cases, the link text describes what the target pages are about.

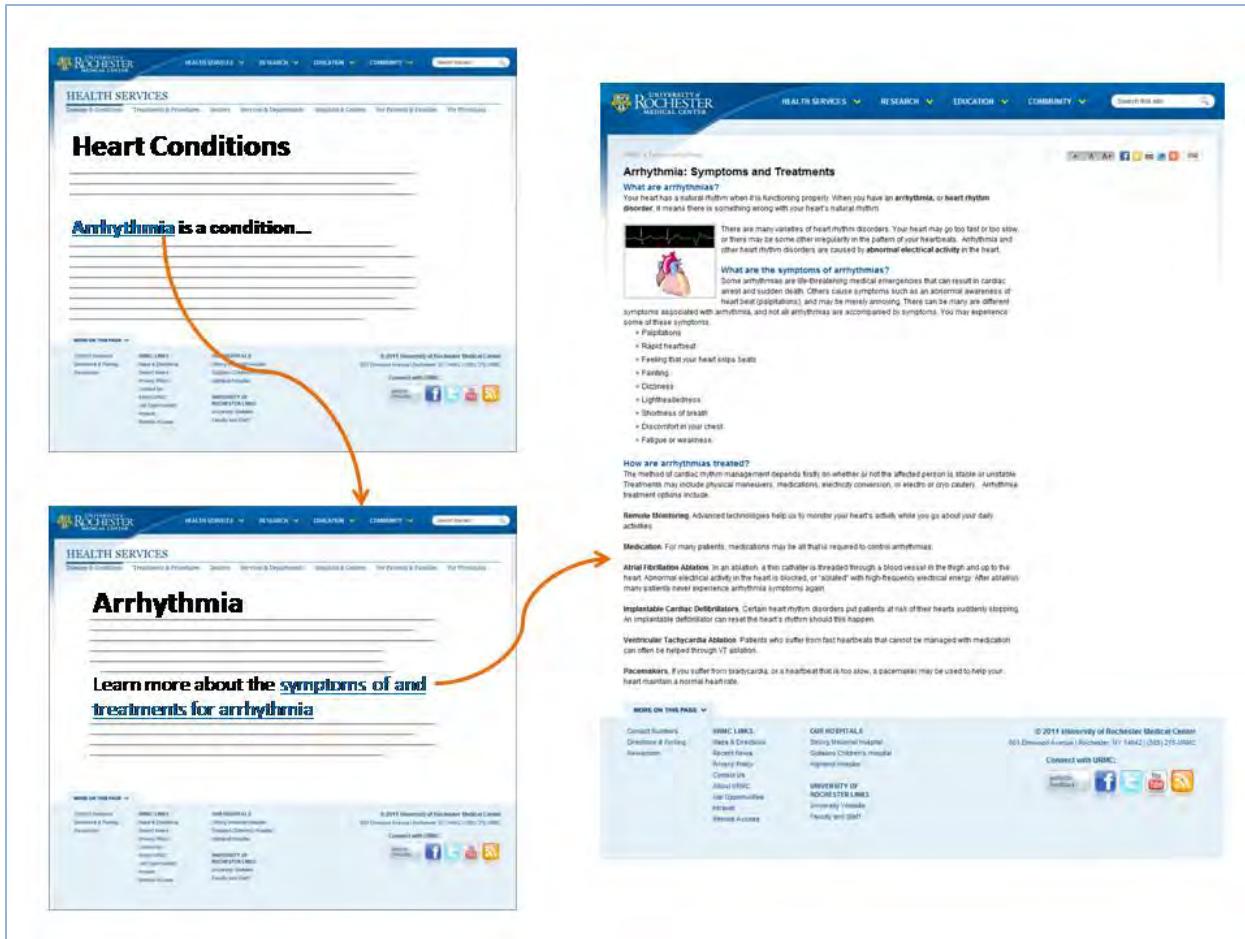


Figure 11: Linking Example

Internal Linking

In general, the more links pointing to a page, the greater importance the page will be given, although it is not recommended to link multiple times to the same page from within a page. Also, **body links** are given more weight than **navigation links** (the links shown in Figure 11 are body links). One way to find URMC pages to link from is to use the site search. A search for “arrhythmia” on the URMC site returned 272 results (Figure 12). Each page where the word “arrhythmia” appears is an opportunity to convert static text to a link.

Results

arrhythmia [Advanced Search](#)

Search Results 1 - 10 of about 272 for arrhythmia. Search took 0.03 seconds.

[Next](#) [Sort by date](#) / Sort by relevance

[Arrhythmia - Department of Cardiology - Rochester, NY - University ...](#)
When you have an **arrhythmia**, or heart rhythm disorder, it means there is something wrong with your heart's natural rhythm. ... **Arrhythmia**. What is it? ...
www.urmc.rochester.edu/cardiology/patient-care/conditions/arrhythmia.cfm - 15k - [Cached »](#)

[Arrhythmia Surgery - Cardiac Surgery - Strong Heart & Vascular ...](#)
... Strong Heart and Vascular Center. Division of Cardiac Surgery. **Arrhythmia** Surgery. ...
Our surgeons who perform **arrhythmia** surgery. Contact Us. ...
www.stronghealth.com/services/surgical/Cardiothoracic/arrhythmia.cfm - 13k - [Cached »](#)

[Heart Conditions & Diseases - Cardiac \(Heart\) surgery](#)
... Read more about understanding the heart. **Arrhythmia** (Dysrhythmia). An ... Learn more about **arrhythmia**. Atrial Fibrillation (AF). Atrial ...
www.stronghealth.com/services/surgical/Cardiothoracic/conditions.cfm - 19k - [Cached »](#)
[More results from www.stronghealth.com/services/surgical/Cardiothoracic »](#)

[Hereditary Arrhythmia Clinic - Department of Cardiology ...](#)
In many cases, our treatments can cure an **arrhythmia** permanently so no further medication is needed. ... Hereditary **Arrhythmia** Clinic. ...
www.urmc.rochester.edu/cardiology/patient-care/programs/hereditary-arrhythmia.cfm - 14k - [Cached »](#)

[Cardiac Mapping - Department of Cardiology - Rochester, NY ...](#)
An electrophysiology study, or EP study for short, is used to find out what is causing a heart rhythm problem like an **arrhythmia**. ...
www.urmc.rochester.edu/cardiology/patient-care/diagnostic-tests/cardiac-mapping.cfm - 14k - [Cached »](#)

[Overview of Pacemakers and Implantable Cardioverter Defibrillators ...](#)
... When the heartbeat becomes erratic, it is referred to as an **arrhythmia** (an abnormal rhythm of the heart, which can cause the heart to pump less effectively). ...
www.urmc.rochester.edu/encyclopedia/content.aspx?pageid=P01810 - 36k - [Cached »](#)
[More results from www.urmc.rochester.edu/encyclopedia/content.aspx »](#)

[Arrhythmias in Children - Online Medical Encyclopedia - University ...](#)
... Arrhythmias in Children. What is an **arrhythmia**? ... What are the symptoms of **arrhythmia**?
The following are the most common symptoms of arrhythmias. ...
www.urmc.rochester.edu/encyclopedia/content.aspx?pageid=P01764 - 52k - [Cached »](#)
[More results from www.urmc.rochester.edu/encyclopedia/content.aspx »](#)

[Stars Align to Bring Boy Back from the Brink - News Room ...](#)
... Before he could even fully wake up, his heart went into an **arrhythmia** again.
PICU staff was ready to shock his heart again, but ...
www.urmc.rochester.edu/news/story/index.cfm?id=2883 - 23k - [Cached »](#)

Result Page [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [Next](#)

Figure 12: URMC Search Results for “Arrhythmia” Search

External Linking

Getting links from external sites is significantly more difficult, and a detailed tutorial on this topic is beyond the scope of this guide.

But here are some general guidelines to help you gain inbound links from external sites:

- **Leverage your relationships.** If you are working with another university or organizations, it may be very pertinent to link the pages of both sites together.
- **Leverage Facebook** or other social media sites to place links to your pages.
- **Convert static instances to links.** Using the same technique described for internal links, you can perform a Google search to find Web sites that mention your department, lab, etc. A request to the webmasters of those sites might convince them to convert the static text instances to links.

- **Good content will get linked to virally.** Content that is unique, helpful, or innovative will naturally get linked to as people tend to acknowledge and share interesting links.