



**Medication Safety for Drugs  
Used in Oncology  
Drug Labelling  
and the Application of  
TALLman Lettering**

**Project Report**

**A joint project of the Institute for  
Safe Medication Practices Canada  
and  
the Canadian Association of  
Provincial Cancer Agencies**

Institute for Safe Medication Practices Canada  
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Canadian Association of Provincial  
Cancer Agencies  
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provinciaux de lutte contre le cancer  
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The **Institute for Safe Medication Practices Canada (ISMP Canada)** is an independent national not-for-profit agency committed to the advancement of medication safety in all health care settings.

ISMP Canada works collaboratively with the health care community, regulatory agencies and policy makers, provincial, national, and international patient safety organizations, the pharmaceutical industry, and the public to promote safe medication practices.

ISMP Canada's mandate includes reviewing, and analyzing medication incident and near-miss reports, identifying contributing factors and causes, making recommendations for the prevention of harmful medication incidents, as well as leading collaborative system improvement initiatives.

The **Canadian Association of Provincial Cancer Agencies (CAPCA)** is an inter-provincial organization of provincial/territorial cancer agencies/programs engaged in cancer control. CAPCA exists to support the reduction of the burden of cancer on Canadians by facilitating and supporting effective leadership, collaboration, communication and advocacy for cancer care and control.

Collectively, the members of CAPCA work to reduce the burden of cancer by promoting the highest quality of care and services for all Canadians affected by cancer and at risk of cancer; and to implement the cancer control strategy in their respective provinces.

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## Executive Summary

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In Canada practitioners have requested guidance from ISMP Canada and the Canadian Association of Provincial Cancer Agencies (CAPCA) regarding medication safety and labelling of look-alike/sound-alike (often referred to as LASA) oncology drug names. ISMP and the FDA in the United States have done leading work in TALLman lettering. The NPSA in the United Kingdom has found that this technique can be a useful approach for dealing with drug name confusability. A working group of stakeholders from CAPCA, CancerCare Manitoba, and Alberta Health Services convened in January 2010 to identify confusable drug name pairs and to help determine how to distinguish them by using TALLman lettering. In order to keep the scope manageable, it was decided to focus on the top 5 problematic drug name pairs.

The first steps of the process involved a review of the literature for published incidents and of the ISMP Canada database of reported errors to identify incidents involving look-alike/sound-alike oncology drug names. A survey of Canadian oncology practitioners was then conducted to determine their concerns regarding which look-alike/sound-alike drug name pairs were considered to have the potential to cause harm or have caused harm due to a mix-up in their practice. The 51 responses provided a confirmation of some previously published problematic names, but more importantly, became a definitive review of those names in oncology practice that Canadian practitioners identified as posing the greatest problems. Eight general groups of names were categorized.

In preparation for the application of TALLman lettering as the distinguishing factor for the name pairs, input was obtained from a human factors engineer and a psycholinguist. The problematic names, classified in groups, were reviewed and the confusable components of their names in pairs were identified.

The work done in the United States by ISMP, the FDA, and the Joint Commission was brought forward and compared to the Canadian list of drug names. In order to avoid confusion and to consolidate the already published recommendations as a unified initiative, the drug name pairs

not having an existing published solution for differentiation were identified. These were cyclophosphamide / cyclosporine, docetaxel / paclitaxel, and sorafenib / sunitinib. The target pairs of names were analyzed for confusability using a multi-strategy approach. The proposed solutions for TALLman lettering in the three focus name pairs were sent to Canadian practitioners and to the International Medication Safety Network (IMSN) for feedback; 27 individual and group responses were received.

The problematic names, with proposed TALLman lettering and source, are shown in the table below.

<b>Look-Alike/Sound-Alike Drug Names With Recommended TALLman Lettering</b>	<b>Source for Recommendation</b>
vinBLAS <sup>t</sup> ine / vinCRIS <sup>t</sup> ine	FDA
CARBO <sup>p</sup> latin / CIS <sup>p</sup> latin	ISMP (US)
<b>DOCE<sup>t</sup>axel / PAC<sup>L</sup>itaxel</b>	ISMP Canada/CAPCA <sup>a</sup>
<b>SORA<sup>f</sup>enib / SUNI<sup>t</sup>inib</b>	ISMP Canada/CAPCA <sup>a</sup>
DAUNOrubicin / DOXOrubicin	FDA
DOXOrubicin / IDArubicin	ISMP (US)
inFLIXimab / riTUXimab	ISMP (US)
mitoXANTRONE	FDA
cycloSERINE / cycloSPORINE	FDA
<b>cyclophosphamide*</b>	ISMP Canada/CAPCA <sup>a</sup>
dimenhyDRINATE / diphenhydrAMINE	FDA

\* TALLman not recommended at this time

<sup>a</sup> The proposed TALLman lettering was endorsed by IMSN at the 5th Annual Meeting of the International Medication Safety Network in Brazil, September 2010.

## Project Report

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With approximately 20,000 marketed health products in Canada, practitioners have requested guidance regarding management of look-alike/sound-alike drug names. A PubMed search for articles on "look alike sound alike drugs" yielded the earliest article published in 1967.<sup>1</sup> Searching by "drug name confusion", reports were found from 1976<sup>2</sup> and 1977.<sup>3</sup> In 1979 McNulty and Spurr, pharmacists at the Bristol Royal Infirmary, compiled a list of brand (trade) and generic look-alike/sound-alike drug names, based on pharmacists' reports and journal searches.<sup>4</sup> In 1981, Teplitsky wrote a cautionary article, "Beware look-alike, sound-alike drugs!"<sup>5</sup> After these early initiatives to inform and alert healthcare practitioners, there were no additional abstracted publications until the 1990s, when doctors from New York reported on two cases of error due to confusion between Losec and Lasix.<sup>6</sup> After this, other reports of confusion errors began to find their way into the medical literature,<sup>7,8</sup> and in 1992, Davis, Cohen and Teplitsky of the Temple School of Pharmacy in Philadelphia published a look-alike/sound-alike list for drugs in the United States.<sup>9</sup> Davis and Cohen were founders of ISMP in the U.S.; and so began the North American pursuit of medication safety as regards drug names. Yet the problem continues to exist world-wide.<sup>10</sup>

Over time, various authors and organizations presented solutions to help with the drug name confusion problem<sup>9,11-13</sup> and even identified ways to predict that a problem might present itself.<sup>14</sup> It wasn't until 2004 that the concept of tallman lettering would be tested and published by Filik et al.<sup>15</sup> (A PubMed search on "tall man letters" yielded only 4 articles,<sup>15-18</sup> with three of these by Filik and colleagues. "Tallman" as a one-word search term in PubMed gave no results. In order to demonstrate the concept of using capital letters within a word, this paper will henceforth use the term TALLman.) The use of TALLman letters has been referred to and used before Filik's first publication on the subject—for example, by the National Coordinating Council for Medication Error Reporting and Prevention<sup>19</sup> and by Berman<sup>20</sup>—but, when preparing for this project, was not specifically searchable in medical/healthcare literature.

Use of TALLman letters does not rely on font, point size or colour. Furthermore, most electronic systems can accommodate lower and upper case text within words, so additional technology is not required. This may be one of the foremost reasons why TALLman lettering has become a widely accepted method for distinguishing among names in the healthcare practice setting. Other options that have been tested, again based solely on text amendments, include using boldface, italics, and underlining.<sup>16,21</sup> TALLman lettering has traditionally been applied to syllables or groups of letters within names, not to various letters within the same name, e.g., chlorproPAMIDE/chlorproMAZINE, and not chlorproPaMiDe/chlorproMaZiNe (which stresses only the disparate letters in the drug names). TALLman lettering has been applied to both generic and trade names of drugs, and manufacturers have used this technique to more boldly present their product's brand name, or if a generic product, to differentiate the name from possible look-alike/sound-alike drug names.

Among the many drugs and drug names that can be confused, high alert drugs that have look-alike/sound-alike names stand out as those to be considered first when applying medication safety techniques. ISMP Canada and the Canadian Association of Provincial Cancer Agencies (CAPCA) recognized that oncology drugs were a priority subset. It was proposed that TALLman lettering be applied to problematic oncology drug name pairs. ISMP and the FDA in the United States have done leading work in TALLman lettering.<sup>22-24</sup> The NPSA in the United Kingdom has found that this technique can be a useful approach for dealing with drug name confusability.<sup>24</sup> Among Canadian provincial cancer agencies at the time of initiation of this project, CancerCare Manitoba had implemented TALLman lettering for select drug names, based on a Required Organizational Practices project for accreditation, of which this was one component. They reviewed published error data on their most commonly used drugs, considered which pairs were addressed in FDA and ISMP (US) and applied TALLman lettering to select drug names. Cancer Care Ontario published guidelines on chemotherapy labelling, which included the recommendation to use TALLman lettering where similarity of drug names is problematic;<sup>26</sup> and Alberta Health Services-Cancer Care began reviewing drug names with a view to developing a prospective method. This was as a result of a root cause analysis and an ISMP (US) survey on strategies for dealing with look-alike/sound-alike drug names. They narrowed down their list to 82 products using only generic name comparisons.

A working group of stakeholders from ISMP Canada, CAPCA, CancerCare Manitoba, and Alberta Health Services (Appendix 1) convened in January 2010 to identify the look-alike/sound-alike drug name pairs of concern in Canada and to help determine how to differentiate them by using TALLman lettering. In order to keep scope of this project manageable, it was decided to focus on the top 5 problematic drug name pairs in oncology.

The first phase involved reviews of published literature and of reported incidents involving look-alike/sound-alike oncology drug names. The number of published look-alike/sound-alike incidents involving oncology drugs was limited and did not provide information beyond what was already known by the project group. A preliminary ISMP Canada aggregate analysis found that about 8% of voluntarily reported incidents with chemotherapy drugs had caused harm or death, confirming the importance of optimizing the safe use of such agents.<sup>27</sup> These voluntarily reported incidents involved a variety of circumstances, not only drug name confusion; and reporters noted that when mix-ups between drugs occurred, they may have involved look-alike names as well as packages. However, this project was focused on drug names alone, and there was a decision to focus specifically on generic names.

The fundamental step in this medication safety project involved a cross-country survey (Appendix 2) of Canadian oncology practitioners to determine which look-alike/sound-alike drug name pairs they considered to have the potential to cause harm or had caused harm due to a mix-up. The 51 responses received from provincial cancer agencies (consolidated input from pharmacy, nursing, and medical staff) and from individual oncology practitioners provided confirmation of some already published problematic names, determined name pairs that had not previously been published, and importantly, became a review of those names in oncology practice that Canadian practitioners identified as posing the greatest concern. Eight general groups of oncology drug names were categorized (Table 1). In many cases respondents noted groups of more than two drugs with problematic look-alike/sound-alike names.



**Table 1 – Responses to a Canadian Survey About Look-alike/Sound-alike Oncology Drug Names of Concern**

<b>Group</b>	<b>Potentially Confusable Names</b>	<b>No. Reported<sup>b</sup></b>
1	vinblastine / vincristine / vinorelbine	34
2	carboplatin / cisplatin / oxaliplatin	22
3	docetaxel / paclitaxel	21
3	paclitaxel / nab-paclitaxel	9
4	dasatinib / imatinib / nilotinib / erlotinib / lapatinib / gefitinib	19
4	sorafenib / sunitinib	8
5	daunorubicin / doxorubicin	18
5	doxorubicin / epirubicin	16
5	doxorubicin / pegylated doxorubicin / liposomal doxorubicin	7
6	bevacizumab / bortezomib / cetuximab / infliximab / rituximab	14
7	mitomycin / mitoxantrone / mitotane	12
8	cycloserine / cyclosporine / cyclophosphamide	10
other	dimenhydrinate / diphenhydramine	10

In preparation for the application of differentiation utilizing TALLman lettering as the distinguishing factor for the name pairs, input was obtained from a human factors engineer, Laura Lin Gosbee. Issues of legibility, syllable breakdown, expert input and consideration of caveats were discussed (Appendix 3). A psycholinguist, Bruce Lambert, was given the list of names and generated a report showing capitalization of select letters of drug name pairs using the ‘optimal alignment technique’ (Appendix 4), which aligns two names and capitalizes unlike letters; this can result in TALLman lettering that is not grouped.

The problematic oncology look-alike/sound-alike drug names, classified in groups, were reviewed and the confusable components of their names in pairs were identified. Again, the

<sup>b</sup> Number of survey responses = 51

decision was made to focus the differentiation efforts on the confusable *generic* drug names. This decision was aligned with current international directions (ISMP and FDA) to promote the differentiation techniques for generic names and not *brand* names.

Looking back at the literature search of published confusable drug name pairs, the work done and published in the United States by ISMP, the FDA, and the Joint Commission was brought forward and compared to the Canadian list of identified look-alike/sound-alike drug names. The drug name pairs not having an existing published solution for differentiation were noted to be cyclophosphamide / cyclosporine, docetaxel / paclitaxel, and sorafenib / sunitinib. These 3 target pairs of names were analyzed using a multi-strategy approach. This included consideration of human factors elements (see Appendix 3), look-alike/sound-alike name components with psycholinguist input (see Appendix 4), legibility, typeface issues, intent to maintain variability, and minimization of capitalization, among other factors. The process also included a review of the TALLman lettering to be put forward, within the context of other oncology TALLman, in order to avoid new look-alike/sound-alike problems.

The proposed solutions for differentiation utilizing TALLman lettering (Appendix 5) in the three target name pairs were sent to (i) the project working group and (ii) the International Medication Safety Network for input; 27 responses were received.

Table 2 lists the TALLman lettering recommendations for oncology look-alike/sound-alike drug names, jointly endorsed by ISMP Canada and CAPCA for use in Canada. Furthermore, the three new recommendations and the process used for determining the application of TALLman lettering were endorsed by the International Medication Safety Network at its September 2010 meeting.<sup>28</sup> The recommendations are aligned with international work recognizing that generic drug names are used world-wide and that efforts to ensure coordination are critical for standardization and synergy in medication safety.

Table 2 - Recommended TALLman Lettering for Oncology Drug Names of Concern

<b>Group</b>	<b>Recommendation</b>	<b>Source<sup>c</sup> for Recommendation</b>
1	vinBLAS <sup>t</sup> ine / vinCRIS <sup>t</sup> ine	FDA
2	CARBO <sup>o</sup> latin / CIS <sup>o</sup> latin	ISMP (US)
3	<b>DOC</b> Etaxel / <b>PACL</b> itaxel	ISMP Canada/CAPCA <sup>d</sup>
4	<b>SOR</b> Afenib / <b>SUN</b> Itinib	ISMP Canada/CAPCA <sup>d</sup>
5	DAUN <sup>o</sup> rubicin / DOX <sup>o</sup> rubicin	FDA
5	DOX <sup>o</sup> rubicin / IDA <sup>o</sup> rubicin	ISMP (US)
6	inFLIX <sup>i</sup> mab / riTUX <sup>i</sup> mab	ISMP (US)
7	mitoXAN <sup>T</sup> TRONE	FDA
8	cycloSER <sup>I</sup> NE / cycloSPOR <sup>I</sup> NE	FDA
8	<b>cyclophosphamide*</b>	ISMP Canada/CAPCA <sup>d</sup>
other	dimenhyDR <sup>I</sup> NATE / diphenhydrAM <sup>I</sup> NE	FDA

\* TALLman not recommended at this time

<sup>c</sup> **Abbreviations:**

FDA - U.S. Food and Drug Administration -

<http://www.fda.gov/Drugs/DrugSafety/MedicationErrors/ucm164587.htm> , dated 2009Jun18 (accessed 2010Jun26)

ISMP (US) - Institute for Safe Medication Practices (United States) - [www.ismp.org/Tools/tallmanletters.pdf](http://www.ismp.org/Tools/tallmanletters.pdf), dated 2008 (accessed 2010Jun26); and [www.ismp.org/Tools/confuseddrugnames.pdf](http://www.ismp.org/Tools/confuseddrugnames.pdf), dated 2010 (accessed 2010Jun26)

<sup>d</sup> ISMP Canada/CAPCA with input from the International Medication Safety Network (IMSN - <http://www.intmedsafe.net/>)

In summary, reading of drug names and the need to differentiate among them occurs at all stages in the medication use process, whether manual or automated: purchasing, storage, prescribing, dispensing, transcribing, administration, and monitoring. The application of TALLman lettering for the differentiation of look-alike/sound-alike names is one of a number of techniques and tools to optimize medication safety for drugs used in oncology. The outcome of this project adds to the published list of recommendations for standardizing the application of TALLman lettering for look-alike/sound-alike oncology drug names and fulfils a need identified by practitioners across Canada.

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## Appendix 2 - Canadian Survey on LASA Oncology Drug Names



[Exit this survey](#)

### MEDICATION SAFETY FOR DRUGS USED IN ONCOLOGY

#### Drug Labelling and the Application of TALLman Lettering - Survey on LASA Oncology Drug Names

Many healthcare practitioners are faced with using and interpreting oncology drug names in their daily practice: ordering (handwritten or via on-line practitioner order entry), reviewing/validating (handwritten or computer-based), selecting from stock, preparing, dispensing, and administering.

The safe use of antineoplastic drugs for treating cancers is a priority for Canadian provincial cancer agencies. The Institute for Safe Medication Practices Canada (ISMP Canada), the Canadian Association of Provincial Cancer Agencies (CAPCA), and individual provincial cancer agencies have all identified that one of the opportunities to assist with making the use of antineoplastic agents safer is through distinctive labelling, intended to clearly differentiate agents from one another.

We are seeking input from oncology practice sites. Below is a short survey. Please review the questions and garner input from a variety of practitioners at your facility (nurses, pharmacists, pharmacy technicians, doctors) and submit your findings by March 31, 2010.

Your responses to the questions will help us to develop an approach to applying one safety strategy, the use of TALLman lettering, to differentiate between look-alike/sound-alike drug names used in oncology so that patient care can be made safer.

You will be contacted again when the short list of problematic drug names has been identified. We will be asking for your input on how to best differentiate the name pairs using proposed TALLman lettering.

**\*Please list 5 to 10 drug name pairs in oncology practice that you consider may have the potential to cause harm or have caused harm due to a mix-up.**

**If you are currently using TALLman lettering to differentiate between the names, please enter the drug names as you print or display them.**

e.g., vinCRISTine / vinBLAstine

1.
2.
3.
4.

- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

**\*What strategies for differentiation of drug names on labels or displays (e.g., computer lists), if any, are currently being employed at your practice site? Please check all that apply.**

**-differentiation-**

- affix "name alert" stickers to areas where LASA products are stored
- change appearance of LASA names on computer screens (e.g., boldface/colour/Tallman letters)
- change appearance of LASA names on pharmacy labels (e.g., boldface/colour/Tallman letters)
- change appearance of LASA names on shelves/bins (e.g., boldface/colour/Tallman letters)
- do not use any differentiation strategies
- use auxiliary labels

**\*What strategies for differentiation of drug names on labels or displays (e.g., computer lists), if any, are currently being employed at your practice site? Please check all that apply.**

**- redundancy -**

- do not use any redundancy strategies
- include brand and generic names on computer screens
- include brand and generic names on MARs

**What strategies for differentiation of drug names on labels or displays (e.g., computer lists), if any, are currently being employed at your practice site?**

**- please specify other labelling strategies you are using -**

- 1.
- 2.
- 3.
- 4.

5.

**\*Please provide any suggestions for differentiating look-alike/sound-alike drug name pairs when they are printed on a label or displayed on a computer screen (e.g., prescribing/order entry software, pharmacy computer system) or on documents (e.g., MAR, preprinted orders) that are not already listed above.**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

**\*Province/Territory of Practice**

**\*Please check the category that best describes you**

- Pharmacist
- Nurse
- Quality/Risk
- Physician
- Pharmacy Technician
- Unit Secretary
- Other (please specify)

Please complete the survey by March 31, 2010  
THANK YOU FOR YOUR TIME AND INPUT!  
All submitted surveys will remain confidential.

## Appendix 3 - Project Planning

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### Considerations when creating a TALLman application:

- has not been studied consistently - users often make a best guess as to which letters warrant capitalization
- may create unintended look-alikes, causing new problems (perhaps with other drug names that may be similar to the chosen pair)
- can decrease variability - the capitalized letters themselves are less distinguishable
- Do any of the following help or interfere with TALLman effect?
  - effect of font
    - **TALLman (arial) vs TALLman (times new roman) vs. TALLman(courier)**
  - effect of type spacing
    - **TALLman (1 pt expanded spacing) vs TALLman(1.5pt condensed spacing)**
  - effect of point size
    - **TALLman (10 pt) vs TALLman (6 pt)**
  - **effect of reverse lettering**
    - **TALLman vs TALLman**
  - **effect of underscoring or frames/boxes**
    - **TALLman or TALLman**
- impact of reliance on TALLman lettering - long-term effects and expectations of the cues being set
- reader language differences - readers whose first language is not English may read/perceive the names differently
- how to apply capitalization - use of consecutive letters or not
  - **(e.g., TALLman vs TallMan or TaLLman or TallMaN)**
- there is usually no baseline, point of comparison as to the impact of TALLman lettering, therefore cannot assume that it has led to improved safety
- no objective data available on how to apply TALLman lettering
  - **TALLman vs tallMAN vs TaLLman**
- Are there letter combinations that should NOT have TALLman lettering applied?

**Possible approaches:**

- identify the selection parameters for the 5 drug name pairs
- agree upon the list of 5 confusable name pairs - take into account whether there are 3 or more confusable names
- keep in mind the considerations (as noted above)
- consider different patterns of capitalization
- note that there may be a number of options which could differentiate drug name pairs (e.g., font, type size, capitalization, shadowing, white on black vs. black on white)
- use panel of experts

**Drug name pairs from survey:**

vinca alkaloids (vinblastine / vincristine / vinorelbine)	34	
PLATINS - carboplatin / cisplatin / oxaliplatin	22	
docetaxel / paclitaxel	21	
paclitaxel /nab-paclitaxel	9	
NIB (dasatinib / imatinib / nilotinib / erlotinib, etc)	19	(dasatinib / imatinib / nilotinib / erlotinib / lapatinib, sorafenib / sunitinib, etc)
doxorubicin / daunorubicin	18	
doxorubicin / epirubicin	16	
doxorubicin formulations	7	
MABS (monoclonals)	14	bevacizumab / bortezomib, cetuzimab / rituximab / infliximab, etc.)
mitomycin / mitoxantrone / mitotane	12	
cyclophosphamide / cyclosporine / cycloserine	10	
dimenhydrinate / diphenhydramine	10	
Total	192	

## Appendix 4 - Optimal Alignment Technique

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vinBLAstine  
vinCRISTine

vinBLASTine  
vinORELBine

vinCrISTine  
vinOrELBine

cARBOplatin  
cISplatin

CARBOplatin  
OXALIplatin

CaRBOplatin  
OXaLIplatin

CiSplatin  
OXALiplatin

CISplatin  
OXALIplatin

DOcEtaxel  
PACLItaxel

paclitaxel  
NABpaclitaxel

DOcEtaxel  
NABPACLItaxel

DASatinib  
IMatinib

DASAtinib  
NILOtinib

DASAtinib  
ERLOtinib

DaSatinib  
LaPatatinib

DASaTInib  
SORaFEnib

DASAtinib  
SUNItinib



iMAtinib  
NiLOtinib

IMAtinib  
ERLOtinib

IMatinib  
LAPatinib

IMaTInib  
SORaFEnib

IMAtinib  
SUNItinib

NIlotinib  
ERlotinib

NILOtinib  
LAPatinib

NILOTInib  
SORAFEnib

NILOtinib  
SUNItinib

niLOtinib  
SUnitinib

ERLOtinib  
LAPatinib

ERLOTInib  
SORAFEnib

ErLOTInib  
SOraFEnib

ERLOtinib  
SUNItinib

LAPaTInib  
SORaFEnib

LAPatinib  
SUNItinib

sORAFEnib  
sUNITInib

dOXorubicin  
dAUNorubicin

DOXOrubicin  
EPIrubicin

bEVACIzumAb  
bORTEzumIb

BeVACIzUmab  
CeTUzImab

BeVACiZUmab  
CeTUZimab

BEVACiZUmab  
RITUXimab

BEVACiZUmab  
INFLiXImab

BORtEzUmIb  
CEtUzImAb

BORtEZUmIb  
RItUXImAb

BOrtEZUmIb  
rItUXImAb

BORTEZUmIb  
INFLIXImAb

CEtuZimab  
RItuXimab

CETUZimab  
INFLIXimab

RITUximab  
INFLIximab

RiTUximab  
iNFLIximab

mitoMYCIn  
mitoXANTROne

mitoMYCIN  
mitoTANE

mitoMYCIn  
mitoTAnE

mitoXANtROne  
mitotAnE

mitoXaNTROne  
mitoTane

mitoXanTRONE  
mitoTane

cycloPHospHMiDE  
cyclospORiN

cycloPHOspHMiDE  
cyclospORiN

cycloPHosPHMiDe  
cycloSERiNe

cycloPHOsPHMiDe  
cycloSERiNe

cycloSPOrin  
cycloSERinE

diMenhydrINATe  
diPHenhydrAMiNe

diMenhydrinATe  
diPHenhydrAMine

## Appendix 5 - International (IMSN) Survey on LASA Oncology Drug Names



### Application of TALLman Lettering for Oncology Drugs Please respond by June 21, 2010 to [vjelincic@ismp-canada.org](mailto:vjelincic@ismp-canada.org)

ISMP and the FDA in the United States have done leading work in TALLman lettering. The NPSA in the United Kingdom has found that this technique can be a useful approach for dealing with drug name confusability. In Canada practitioners have requested guidance from ISMP Canada and the Canadian Association of Provincial Cancer Agencies (CAPCA). We have been working with stakeholders of CAPCA, CancerCare Manitoba, and Alberta Health Services to identify confusable drug name pairs and help distinguish them by using TALLman lettering.

#### Approach

- survey practitioner concerns
- review published problematic pairs and error reports
- literature search identifying name pairs with solutions
- identify target pairs
- input from psycholinguistics and human factors experts
- exclude name pairs with existing TALLman differentiation schemes published by ISMP/FDA/JC
- focus on pairs, not groups, of names
- minimize TALLman application to maintain variability and avoid "over capitalization"

#### Recommendations

The following are recommendations from ISMP Canada. Please indicate your agreement or disagreement and *respond by June 21, 2010*. You may include comments.

STATEMENT	AGREE	DISAGREE	COMMENTS
1. DOCEtaxel / PACLitaxel	<input type="radio"/>	<input type="radio"/>	
2. a) SUNItinib / SORAFenib OR b) SUNItinib / SORAFEnib	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>	
3. A name pair of concern is cyclophosphamide and cyclosporine. Because there is currently recommended TALLman lettering for cycloSPORINE and cycloSERINE, we recommend that <b>no TALLman lettering be applied to cyclophosphamide</b> at this time. We will encourage TALLman lettering for cyclosporine and cycloserine	<input type="radio"/>	<input type="radio"/>	