

# STUDIES PROMOTE MANGO CONSUMPTION FOR HEALTH

By Dr Alice Geroges Geagea

The National Mango Board is touting recent research it funded that shows the fruit possesses what it calls promising health benefits in overall health and in fighting breast cancer cells.

Research presented at the Federation of American Societies for Experimental Biology meeting in San Diego in late April suggests people who eat mangoes maintain a better diet than those that don't while another study shows the fruit contains a substance that may affect breast cancer cell proliferation.

In the first study, researchers compared the diets of more than 13,000 individuals participating in the National Health and Nutrition Examination Survey between 2001 and 2008 to the Healthy Eating Index, which compares people's diets to federal dietary guidelines.

Researchers found that people who regularly consumed mangoes scored higher on the healthy eating index, and they had lower levels of sodium and total fat. They also maintained lower average body weight, according to a news release by the Orlando, Fla.-based mango board.

"The research adds to the NMB's body of evidence that mangos are not only delicious but healthy," said Megan McKenna, the board's director of marketing. "In addition to helping consumers select and cut mangos, teaching consumers of mango's nutritional value helps increase mango consumption across the U.S."

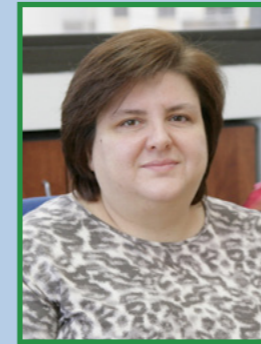
Conducted by Texas A&M University researchers, the other study discovered that a polyphenolic compound in keitt mangoes may be toxic to breast cancer cells. The study found decreased proliferation of breast cancer cells treated with the polyphenolic extract and reduced tumor size and weight in mice.

"In summary, the anti-carcinogenic and anti-inflammatory activity of mango polyphenolics in breast cancer cells were at least in part due to targeting proteins that play an important role in the survival of breast cancer cells," Susanne Talcott, one of the researchers, said in the release. "The ability for bioactive components in mangoes to reduce cancer promoting cells may be the next big thing in the battle against breast cancer, but more research is needed at this time."

The mango board said results from the studies should add to the body of evidence suggesting mangoes are a nutritional powerhouse.



# OUTCOME MANAGEMENT HOSPITALIZATION



By Dr HeLene Bekhazi  
Medical Director – MedNet Liban

MedNet Liban published a bulletin about Outcomes Management. This subject of interest has been previously raised in the media, but it is the first time statistical studies are done and results shared.

In fact MedNet Liban is authorized by the patients to access their medical records which enable it to analyze the information for the purpose of undertaking studies, researches and statistics that highlight many important things.

The study is done on MedNet Liban population which is a sample of the Lebanese population.

Four types of outcomes are evaluated: complications, infections, re-admissions within 30 days, and death.

The objectives are to highlight the performance of the Lebanese Hospitals, compare them to some international figures, highlight the impact on cost and find out an action plan to improve the results.

1- What are the results in your study and how do Lebanese hospitals compare to the international ones?

Our results show that 5% of the admissions to hospitals encounter at least one of the 4 outcomes described and they are responsible for 16% of the approved amounts. Comparatively, according to the Center for Disease Control (CDC), adverse events (bad outcomes) affecting medical care occur in about 3 to 4% of all patients in USA. According to other references, it is 7.5% in Canada, 10.8% in UK, and 16.6% in Australia.

2-What are the outcomes' rates and their impact on cost for each type of outcomes?

The infection is the outcome having the highest impact on the length of stay and cost, increasing the average length of stay about 10 folds (from 2.3 to 24.4 days), and the average cost of claim about 9 folds (from 1,602\$ to 15,531\$). The infection rate in our study is only 0.40% for all admissions but increases to 2 % for admissions with hospitalizations of more than 1 day.

The complication rate is 1.1% and it increases to 4.9% when the length of stay is over 1 day: when it occurs, the cost is increased by 437%.

The death rate is 0.7% and becomes 2.7% for more than 1 day in hospital; it impacts the cost by increasing it 444%.

The readmission within 30 days occurs in 2.8% of the cases, but only 2.4% when the length of stay is more than 1; the second admission has an increased cost of 4% compared to the first one.

3-What are the surgical procedures studied in the bulletin?

We have studied 4 procedures: open heart (coronary artery bypass graft), total hip replacement, and total knee replacement: these are big and major surgeries, well studied in the literature; in addition to the cholecystectomy (gallbladder removal) which is a simple and frequent procedure.

4-What were the outcomes related to Open Heart?

For the open heart, we had good results: compared to USA, we had less outcomes' rate in general but same mortality rate of 1.9%. The demographic data shows that men are more concerned than women and at an earlier age; also our data shows that the Lebanese population is doing CABG at a mean age of 61 while it is 66 in the USA. Interesting information is that new centers have higher outcomes rate, sometimes reaching 50%, which indicates that the experience is inversely proportional to the outcomes rate. The associated diseases called co morbidities impacts the outcomes rate by increasing it, and of course this will impact the length of stay and subsequently the cost.

5-What about the other procedures in summary?

In summary, the Total Hip Replacement in Lebanon has better results than the Total Knee Replacement. While the outcomes' rate is 8.5% for the hip, it is 10.5% for the knee. We have noted increased demand on both surgeries, most probably related to the increasing age of our population. In fact while the mean age in MedNet portfolio was 34.78 in 2005, it is 36.5 in 2010, and the rate of the population above 60 increased from 10% before 2008 to 13% after 2008.

As for the cholecystectomy, although it is a safe procedure in general, its outcomes' rate is 8%. Of course laparoscopy is safer than the open surgery, with 5.8% outcomes rate versus 9.7%.

6 - How was the performance of the hospitals and how do they compare to each other?

As previously stated, 5% of the admissions encounter at least one of the four outcomes described; this rate increase to 12% when the length of stay is over 1 day.

In general the University Hospitals have better results than the Non University Hospitals, and Great Beirut has better results than other hospitals. But the hospitals within our Network do not have all the same specifications. The number of beds per hospital varies between 10 and 544. The services provided also vary from only one specialty by hospital, to a complete set of specialties. This has a major influence on the outcomes, as these are directly related to the complexities of the cases.

7-What is the message you would like to pass to the readers?

The most important is to start somewhere: Statistics have no value if they are not used to better understand the problem and improve the performance. We would like to invite the hospitals to take this issue seriously and document their outcomes as this is the cornerstone to measure the performance indicators and consequently enhance the quality of care.

We would like also to stress on the cost implication: in the USA a number of outcomes is categorized as "preventable" and these are not being paid by the TPA s nor by the patients, they are entirely at the responsibility of the hospital.