VIEWPOINT

more information than you might expect

Volume 5 Spring 2009

Our Viewpoint

By J.C. Brueckner, President & COO

I would like to share some Generali USA 2008 highlights with you. Given the tough economic times it's rare that any company refers to the past year's results as highlights. Generali USA is an exception to that rule. 2008 was a record breaking year in several respects. Our new business production exceeded our expectations and grew 11% over 2007 with $83 billion of face amount booked. Generali USA maintained the number four position for recurring new business written in the U.S. market according to the Munich survey. Our profits for the year were 23% above plan despite some write downs resulting from market conditions. Both new business production and earnings for the year were record results for Generali USA.

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SPN: Solitary Pulmonary Nodules

By Richard Rougeau, M.D., VP and Chief Medical Officer

A SPN is a single, asymptomatic, discrete pulmonary opacity that is less than 3 cm in diameter, surrounded by normal lung tissue and not associated with adjacent lung abnormalities or atelectasis. Lesions greater than 3 cm in diameter are called masses and the likelihood of malignancy is greatly enhanced. SPNs are generally spherical yet the two dimensional shadow they create on a chest radiography (CXR) causes them to resemble a coin; hence the term "coin lesion". Linear or sheet like opacities are therefore not SPNs but are also unlikely to represent a malignancy.[1] SPNs are typically discovered as an incidental finding on a routine CXR at a rate between 1 in every 500 to 1000 chest films. In recent years the growing use of computed tomography (CT) scanning has resulted in their detection with greater frequency. In fact, one study noted up to 50% of smokers over age 50 have an SPN, with detection of SPNs as small as 1 – 2 mm by CT now routine.[2]

There are at least 40 different etiologies for SPNs which in-

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View On...Steve Dvorak

The Viewpoint (TV) is pleased to feature the latest installment in our View On series. Each issue features an interview with various key players within the Generali USA circle. The objective behind 'View On...' is to profile members of our team and give everyone the opportunity of hearing directly about their respective responsibilities and business activities, their involvement and contribution to our business, information about market issues and/or challenges affecting business initiatives, plus individual ideas and views on current business developments. Finally, it provides an interesting personal perspective on

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SPN (continued from page 1)

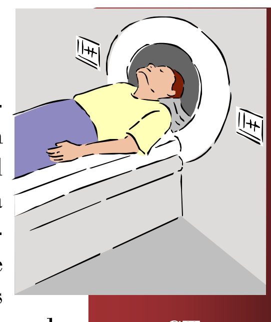
clude various vascular, congenital, inflammatory, infectious and neoplastic origins. Of those resulting from neoplasia, approximately 60% are benign and the remaining 40% malignant. Benign SPNs consist of granulomas resulting from current or past infection in 80% of cases and an additional 10% arise from hamartomas. (Hamartomas are focal malformations, resulting from faulty development in an organ such as the lung, of an abnormal mixture of tissue elements such as fat, bone, skeletal muscle, calcification etc.) With malignant SPNs roughly 60% are thought to be a lung primary and the remaining 40% metastases. The incidence of malignancy in general, ranges from 10 -70% of all SPNs detected depending upon the particular study and reference population studied.

Most SPNs are discovered incidentally on a CXR undertaken for routine screening. Clinical assessment involves an evaluation of the history, a physical examination and review of any previous CXRs or other previously undertaken chest imaging procedures. The goal of the assessment is to facilitate definitive resection of those lesions thought at high risk of malignancy and flag less suspicious lesions for follow-up imaging, as necessary. Guidelines for interval follow-up of non-calcified SPNs have tended to follow an accepted standard of 2 years for many years which has coincidently led to postponement of many insurance applications for a similar period. These guidelines were developed prior to the widespread use of chest CT and as such warrant a more critical appraisal of their relevance to both contemporary evidence based clinical and insurance practices. This article is therefore an attempt to examine and highlight the evidence to that end.

Given that only biopsy information can definitively diagnose a lesion the key issue for all Underwriters is how to systematically differentiate benign from malignant SPNs, based upon specific criteria. While most SPNs are benign, they may represent an early stage of lung cancer which is the leading cause of cancer death in the U.S., accounting for more deaths annually than breast, colon, and prostate cancers combined.[3] Individuals with resected malignant SPNs (Stage 1A) have 5 year survival of 80% while those with advanced malignant lung disease have a 5 year survival of <5%. This highlights the importance of accurate clinical diagnosis and management while simultaneously advancing the premise that early intervention may provide an opportunity for cure.[4]

Recent developments in the radiologic evaluation of SPNs involve improvements in radiographic resolution of SPN structure. As previously mentioned, CT scanning has largely replaced the traditional CXR for follow-up evaluation of incidentally discovered SPNs allowing an improved ability to assess:

- Margin characteristics - While a smooth nodule border is suggestive of a benign origin, a spiculated border (Corona Radiata sign) consisting of very fine linear extensions outward from the nodule is suggestive of malignancy. Intermediate between the two in terms of risk is a scalloped border.



CT scanning has largely replaced the traditional CXR for follow-up evaluation of incidentally discovered SPNs...

- Calcification patterns – generally suggest a benign lesion when described as central, popcorn or lamellar. Much less commonly, eccentric and or stippled patterns have been associated with malignancy and require further evaluation as a result.

- Nodule size – traditionally SPN stability for 2 years by serial CXR exams was found to reflect a benign diagnosis in at least 90% of cases.[5] CT data indicate <1% of very small SPNs (<5mm) in those with no previous cancer history will eventually prove malignant.[2] Further, another study from the Mayo Clinic indicated a likelihood of malignancy of 0.2% for nodules $\leq$ 3 mm, 0.9% for those 4 -7 mm, 18% for those 8 – 20 mm and 50% for those > 20 mm.[6]

- Growth rate – evaluation referred to as the Volume Doubling Time (VDT) of a malignant

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SPN (continued from page 2)

Current and past smoking history—the relative risk for lung cancer was 10X greater[12] ...

SPN is rarely < 1 month or > 1 year. For a sphere to double in volume it must increase its diameter by 25 – 30% which implies a need for accurate measurement. Increased resolution of the imaging technique improves measurement accuracy which is especially important for "difficult" lesions such as those that are small, have indistinct borders or are obscured. A standard CXR has the ability to discriminate to between 3.0 – 5.0 mm while a High Resolution CT (HRCT) down to 0.3 mm.[7] Given the enhanced resolution of CT, malignant SPNs between 5 – 9 mm with interval growth were detected in one study within 4-8 months in 6% of cases followed.[8] Regrettably, an apparent lack of growth over shorter time intervals provides little assurance of a favorable outcome.

Noteworthy exceptions to the above propositions are:

- Some bronchoalveolar cell carcinomas and typical carcinoids can occasionally appear stable for 2 or more years.[9] Similarly, the VDT for non-solid nodules characteristically described as "ground glass opacities" were in excess of 2 years especially for sub-centimeter lesions.
- The widespread assumption that 2 year stability on chest radiography (CXR) reflects a benign process should be used with caution as the initial studies upon which the advice were based, were both retrospective and biased, yielding a positive predictive value of only 65% for a benign outcome when re-reviewed.[10]
- Optimal follow-up intervals by CT have yet to be determined, but the tradition of every 3 months for the first year after discovery and then every 6 months during the second year has been suggested. [7] The Fleischner Society, which is an influential academic Radiologic society, would argue that for lesions < 1 mm, this would seem particularly onerous in terms of poor utilization of society's scarce resources, increased healthcare costs and increased radiation exposure to those affected individuals. They argue that medicolegal concerns are partly responsible for driving the perceived liability if a malignant SPN should develop, and therefore the performance of many unnecessary CT scans.[2]

Additionally, the following features are important points to consider in deciding upon the inherent risk of any particular SPN in a given individual. The applicant's overall risk profile needs to integrate:

- Current and past smoking history – the relative risk of lung cancer for smokers was 10X greater than for non-smokers and for "heavy smokers" it was up to 35X greater.[12]
- Previous cancer history - a history of a previous malignancy significantly increases the likelihood of a particular SPN being malignant, subject to the nature, grade and stage of the primary tumor.[11]
- Age of the individual – risk of malignancy increases with age. For individuals younger than age 40, the risk is 3%. For those between ages 40 – 49, the risk is 15%. For those between ages 50 – 59, the risk is 43% and for those ≥ age 60, the risk is at least 50%.[3]
- Exposure to endemic fungal (Histoplasmosis, Blastomycosis, Coccidiomycosis) spores.
- Tuberculosis exposures – often tend to produce lesions that show evidence of cavitation.
- Potential occupational exposures (radon, uranium, asbestos, nickel, chromium, and polyvinyl chloride).

Not infrequently an Underwriter may be presented with

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SPN (continued from page 3)

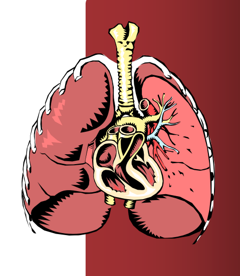
medical information suggesting a clinical workup of a higher risk SPN has been undertaken. This information needs to be put into context and factored into the overall risk analysis. Non-surgical approaches to testing may include:

- CT Densitometry – involves measurement of "attenuation values" with benign lesions exhibiting higher values. Results vary depending on the cutoff used (185 – 265 Hounsfield Units) as well availability of local resources, thereby limiting its widespread adoption.
- Contrast enhanced CT - contrast material is infused intravenously and the degree of enhancement, expressed in Hounsfield Units (H.U.), is used to differentiate lesions. An increase of 20 H.U. from baseline is considered evidence for detection of a likely malignant process. Expert consensus believes this is a promising technology but believes further validation is necessary.[13]
- Bronchoscopy – is dependent upon the nodule size, proximity to the bronchial airways and cancer prevalence in the population under study. Ultra thin bronchoscopy which makes use of fiber optic technology can reach peripherally beyond eight generation bronchi to permit direct visualization and sampling of selected lesions.[14]
- Transthoracic fine needle aspiration biopsy (FNA) – it may be possible to obtain a tissue sample from peripherally located SPNs (usually ≥ 10 mm in size) however, the incidence of pneumothorax post procedure is up to 30% limiting its widespread use.
- Positron Emission Tomography (PET) – as most lung tumors have greater metabolic activity than the surrounding normal lung tissue, the injection and subsequent uptake of radiolabeled glucose (fludeoxyglucose or F18) is used to differentiate malignant lesions. Results with this technique are constantly improving and recent data suggests "definite positive" results were 10X more likely than CT in predicting malignancy.[15]

In terms of surgical procedures to excise suspicious SPNs, both thoracotomy and video-assisted thorascopic procedures are options. As nearly all SPNs are resectable additional factors impress upon the decision to select a given approach. While resection of "benign" SPNs through a small wedge resection has an operative mortality rate of < 1%, lobectomy for malignant SPNs has an operative mortality rate ranging between 3-7%. With the promise of lesser morbidity and shorter hospital stays an initial thorascopic approach is becoming more popular, which can be subsequently modified to an open approach should an intra-operative frozen section pathology report demand a wider margin of resection.

In planning to develop evidence based rating guidelines it would seem prudent to follow the lead of clinical medicine in this regard. An article by Ost et al in the NEJM in 2003 apportions risk into 3 broad categories based on probability of malignancy in a given SPN and outlines further recommended testing and follow-up.[7] (See Table 1 on page 5) The clinically estimated probabilities of cancer of <10%, 10 – 60% and >60% mesh reasonably well with studies describing the natural history of SPNs as outlined above. Further, it would seem reasonable to conclude that a fourth "very low risk" category may be justified by stratifying those lesions < 5 mm in diameter by CT, whose natural history suggests <1% chance of malignancy.

Finally, it must be recognized that estimating the probability of cancer in individuals with incidentally found SPNs is an imperfect science and that there are no evidence based guidelines to cover every possible scenario. The approach to risk stratification requires factoring in all available information as previously outlined. Selected very small lesions when evaluated by CT may possibly warrant an offer without further investigation or follow-up imaging. Larger lesions will likely require a variable schedule of follow-up imaging and/or testing procedures, depending upon the details, to further characterize the mortality risk involved.



An underwriter may be presented with medical information suggesting a clinical workup of a higher risk SPN has been undertaken.

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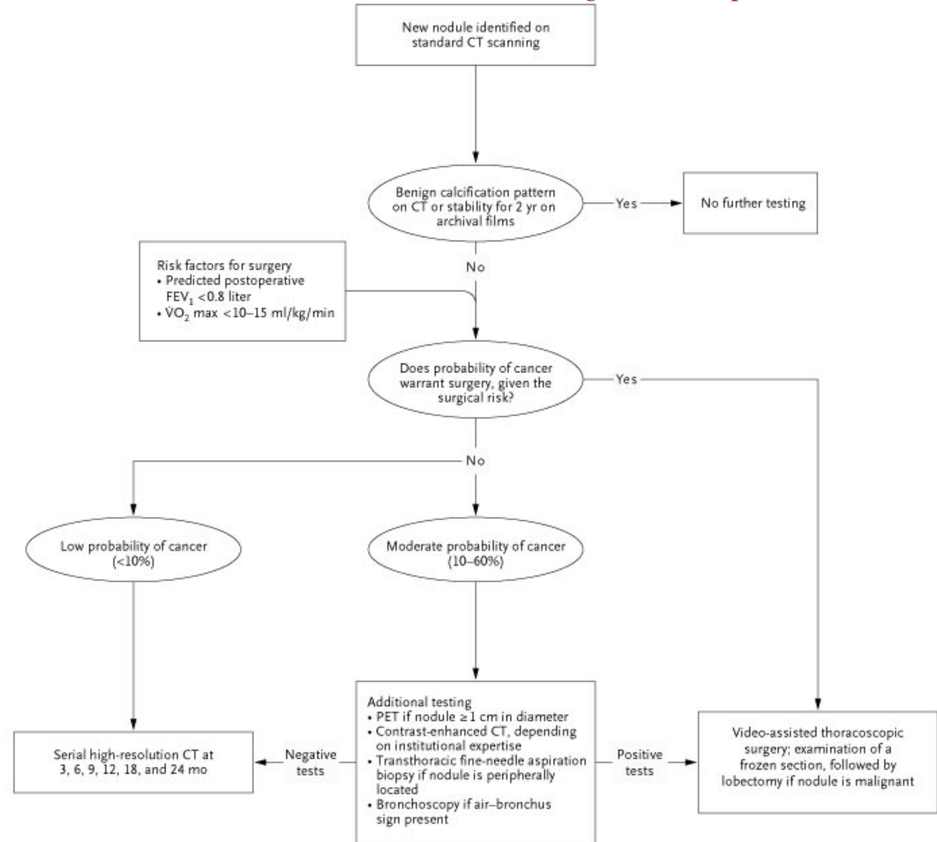
Table 1: Recommended Testing & Follow-up



Ost D et al, NEJM Vol. 348:2535-2542

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them, e.g. hobbies, interests.

This installment spotlights Steve Dvorak, Marketing and Underwriting Vice President from our Group Reinsurance Division.

TV: Steve, please introduce yourself to our readers.

Steve: I am Minnesota born and raised and have lived in Minneapolis my entire life. My wonderful wife Deb and I will be celebrating 33 years of marriage this May. We are the proud parents of two grown children and two adorable grandchildren. Our son and his wife have a 10 month old boy and our daughter and her husband have a 16 month old girl.

I have worked in the insurance industry for the past 29 years. For the first 10 years I was an agent and sales manager for a large national life and health insurer. In 1990 I joined the group life and health reinsurance division of NWNL in a marketing and underwriting capacity and I have been in the group reinsurance industry ever since.

TV: Can you summarise what you do at Generali USA?

Steve: I am primarily a marketing underwriter. I am not only responsible for the marketing of Generali USA's group and accident related products to Life Carriers directly and through Reinsurance Intermediaries but once the RFP comes in it is my job to underwrite, price and sell Generali's proposal. The strength of this model is that through my travels calling on insurers to discuss their risk management issues I am able to get a clear picture of their reinsurance needs. When then developing our reinsurance proposal I can tailor it to best suit those needs or suggest alternative solutions that may be more effective in accomplishing the client's risk management objectives.

TV: How did you become part of Generali USA's Group team and what progress have you made over the last couple years?

Steve: Terry Dickinson inquired about my interest in joining him to establish a Group Reinsurance Division for Generali. The opportunity to be part of an effort to build a group operation from the ground up for a company with the size and strength of Generali was exciting and it was a challenge that I felt I was ready for. I had worked with Terry, Todd Tretsven and Mark Laulainen for many years and I was confident that we would put together a team that would be successful in this endeavour.

It is hard to believe but we are coming up on our 6th year at Generali USA. The Group Division has met or exceeded profit objectives each year and we are excited about our future.

TV: What are your key products and services?

Steve: The Group Division focuses on Group Life and AD&D programs as well as accident related reinsurance products such as Accidental Death Carve-Out (ADCO), Bulk ADB and Voluntary AD&D. We have other secondary products like abnormal mortality life stop loss but our primary focus is on Group Life and AD&D and ADCO.

TV: What can you tell us about your main business objectives and focus for 2009?

Steve: Our objectives are pretty straightforward. We must continue to grow. We need to retain our inforce business and we need to continue to grow our block by adding new business. To accomplish this we have to increase our number of client companies and place additional reinsurance coverages with our existing clients.

Given the current economic climate and the uncertainty surrounding the financial markets, both in the U.S. and internationally, I believe Generali's strength and longevity will help set us apart from many of our competitors. By continuing to market products and services that enable our clients to have a greater chance of meeting their financial objectives we believe we will once again have an excellent year.

I believe Generali's strength and longevity will help set us apart from many of our competitors.

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We believe that we are a business partner. Our objective is to help our client companies write business.

TV: About the Group market, can you give us a short overview of the current market conditions and identify the major challenges insurers will face in 2009? What do you do to help them meet these challenges?

Steve: It has been my experience the past few years that insurers are having a much more difficult time growing their group life and AD&D business. Current group market conditions are extremely competitive and incumbent carriers are doing all they can just to retain their business, thus making the task of writing a new employer group all the more difficult. There is increasing pressure to offer multi-year rate guarantees of up to 4 and 5 years. In addition, we are seeing very high guarantee issue limits, overall maximums and plan designs.

As a reinsurer we believe that we are more than just an outlet to lay off risk. We believe that we are a business partner. Our objective is to help our client companies write business. However, just as importantly, it is our responsibility to help them write profitable business. Facultatively underwriting cases, updating their underwriting guidelines and plan design, providing market intelligence and assisting in concentration management are a few of the tools that we use when working with our clients.

TV: Enough about the business. We would like to hear more about you. What do you like most about your job? What do you least like about your job?

Steve: That's a tough one because there are so many things that I enjoy. The work environment and the culture that we have at Generali USA is great. I really enjoy my co-workers in Minneapolis and Kansas City. Writing a new piece of business is always satisfying. Lastly, the personal friendships that have developed out of my business relationships have been rewarding.

The thing that I absolutely hate about my job is learning that we did not win a case that I underwrote.

TV: What are the most memorable moments in your career?

Steve: I would have to say that getting this Group Division up and running and having the success that we have had at Generali is the highlight of my career.

TV: Do you enjoy sports?

Steve: I only purchase the newspaper so I can read the sports page! Yes, I do enjoy my sports. Baseball is my favorite but football, hockey, golf and college basketball are right up there.

TV: What do you enjoy doing when you finally have a chance to be at home or on vacation? What are your hobbies?

Steve: My wife and I like to spend time at our lake cabin with our kids. One or both of our kids and their spouses make it to the cabin most every weekend. This year should be even more fun because the grandkids will be old enough to enjoy the water and the beach. My wife, our son and our son-in-law all love to golf so I never have much of a problem finding somebody to get 18 holes in with on a Saturday or Sunday morning. Our vacations are normally spent on a beach in the Caribbean soaking in the sunshine, having a few adult beverages and just plain relaxing.

TV: Finally is there a message or moral in the form of an anecdote you would like to share with us?

Steve: My favorite is this: " Too many people are looking for a position with the responsibility of a child, the hours of a vacationer and the income of an executive." Sad but true!

TV: Steve, it's been a pleasure talking to you. Thank you for sharing your time with us. Please share with our readers how they can get in touch with you. Finally, we wish you every success with your plans for 2009.

Steve: It has been my pleasure.

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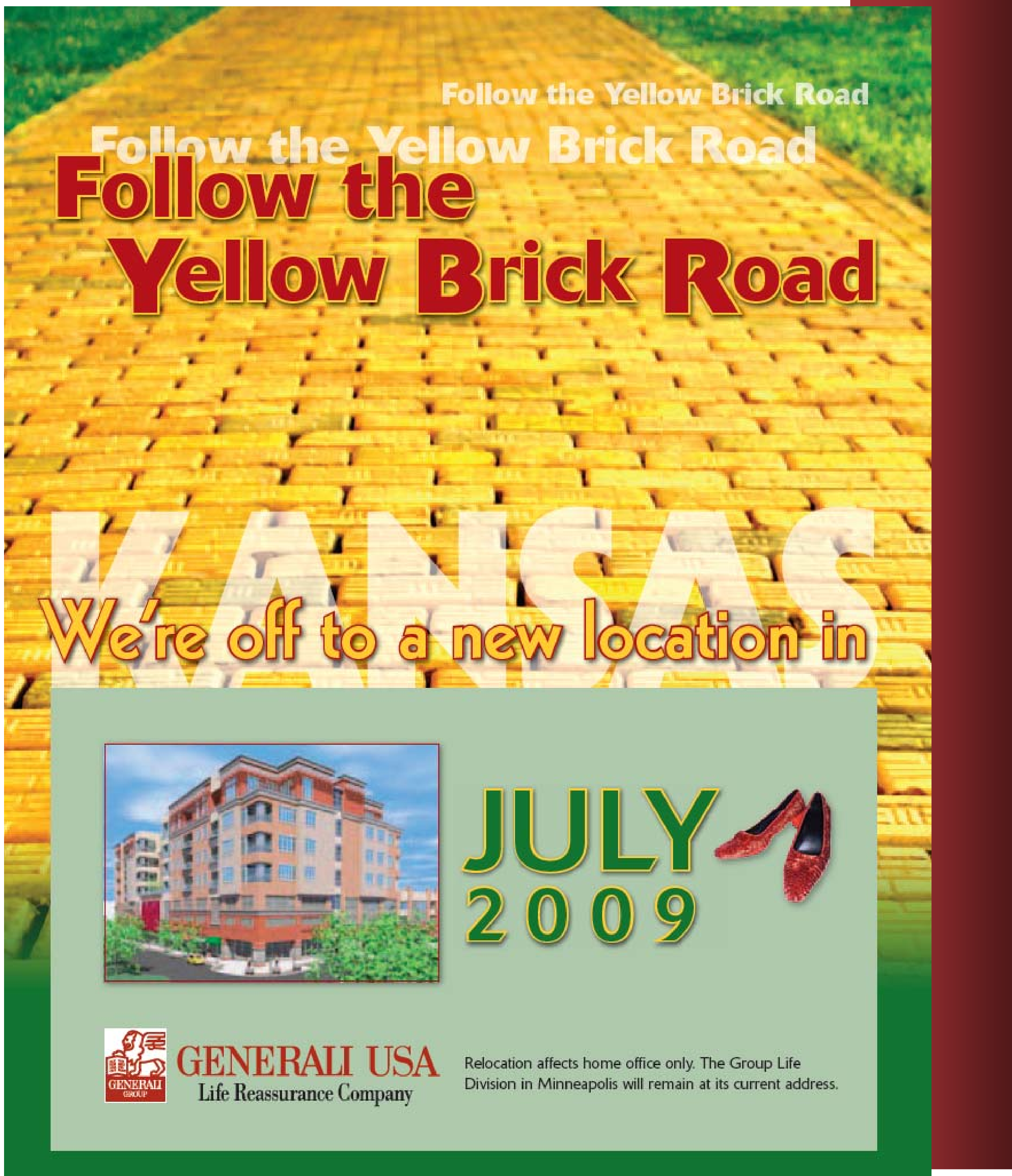
Generali USA's New Office



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From an infrastructure standpoint, we continued to make progress towards restructuring our data and rewriting our business applications. This is a critical project that will strengthen our processing and data mining capabilities, and position us well to handle future growth. Throughout this project our employees have been challenged to think outside of how work is done today and help design a system that does it the way it should be done. It has been a tremendous growth experience for all of us and we are now beginning to reap the benefits as we have begun to utilize some of the new applications. The project remains on plan to be completed by the end of the first quarter 2010.

Another exciting project is currently underway here at Generali USA. Our Kansas City office will be moving to new offices in Lenexa, Kansas in July of this year. You will be receiving more information regarding the move over the next several weeks. Keep an eye out for emails that will provide all of the details and new contact information. We are very excited about our new space and welcome all of you to come out and visit.

I would like to close by saying "thank you" to all of our valued business partners. We appreciate the confidence you have placed in us and we will work hard to retain your business.

On The Move...Tammy Kapeller Promoted To SVP

Tammy Kapeller, FSA, MAAA has been promoted to Senior Vice President – Technology & Administration at Generali USA. In addition to Tammy's current duties pertaining to business process improvement, she will be leading the direction of IT and Administration. Tammy has been with the company for 20 years and has held various positions including direct side and reinsurance actuarial, sales and marketing roles.

If you would like to contact Tammy, her email address is: TKapeller@GeneraliUSA.com or phone, 816.412.3735.

Generali USA Life Reassurance

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