INTERVIEW

Interview: developing therapies for lung cancer

Silvia Novello* speaks to Roshaine Wijayatunga, Managing Commissioning Editor: Silvia Novello is a Full Professor of Medical Oncology in the Oncology Department at San Luigi Hospital in Orbassano, Italy, part of the University of Turin. She earned her medical degree and completed the postgraduate training in respiratory medicine and medical oncology at the University of Turin and partially at the Institut Gustave Roussy in France. Currently, she is head of the Thoracic Oncology Unit at the San Luigi Hospital, Orbassano (Turin), where she also tutors medical students and postgraduate students in respiratory medicine and medical oncology. Novello’s research interests include thoracic malignancies, primary prevention, gender differences in lung cancer, basic and clinical applied research on lung cancer, including pharmacogenomics. She is involved in many European and national controlled clinical trials evaluating new approaches in diagnosis and lung cancer therapy.

From July 2012 until 2016, Novello has been a Member of the Board of Directors of the International Association for the Study of Lung Cancer and since October 2016 Member of the Board of Directors of the Italian Association of Medical Oncology and member of other several scientific societies including the American Society of Clinical Oncology and the European Society of Medical Oncology. Currently, she is the President of Women Against Lung Cancer in Europe, a nonprofit European Association founded in 2006 in Turin, Italy, part of the scientific Committee of Lung cancer Europe and also a member of the Scientific Committee of Bonnie J Addario Lung Cancer Foundation and Member of the Scientific Committee of Investigación sobre Cáncer de Pulmón en Mujeres. She is the author or co-author of over 100 publications in peer-reviewed journals.

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What led you into lung cancer research?
I started my career as a Pulmonologist and my major interest was thoracic oncology since the beginning. This was mainly due to the possibility to merge clinic and research. Having this background is somewhat easier to deal with these patients, who are frequently heavy smokers (or former smokers), with comorbidities that are part of the daily clinical practice for a Pulmonologist.

You have been involved in the AURA study. Could you tell us a little about the aims & findings of the study?
The AURA trials are another important piece in the thoracic oncology field looking...
first at the safety and activity of osimertinib in 
EGFR-mutated patients and also to its efficacy 
compared with chemotherapy in progressing 
advanced/metastatic 
EGFR T790M mutation-
positive NSCLC patients who have received 
prior EGFR TKI therapy. This drug is approved 
by US and European regulatory agencies and 
recommended in national and international 
Guidelines, being currently the treatment for 
those patients with 
EGFR mutation, treated with first- 
or second-generation EGFR TKI therapy 
and developing resistance due to the mutation 
called T790M.

You are involved in the development of 
new drugs for lung cancer. Do many drugs 
fail early stage trials?

In the last 15 years, several attempts were made 
in order to introduce new treatments and new 
approaches in the lung cancer therapeutic algo-

rithm. Several improvements have been done, 
but unfortunately there are many more failures 
already in Phase I and, even worse, in Phase III 
trials. In fact, it could happen that some pos-
itive signals are coming from a Phase II study, 
inducing pharma companies and researchers to 
move forward in the development.

What are the most promising new drugs in 
development for lung cancer?

In my opinion, mainly focusing on advanced 
NSCLC, there are at least three turning points 
in the last 15 years: the introduction of the con-
cept of histology as a predictive factor due to 
the results of the pemetrexed registration trial 
in first line; the start of precision medicine in 
thoracic oncology with the identification of two 
druggable biomarkers (EGFR and Alk) and the 
ew world of immunotherapy starting from the 
results of nivolumab in squamous carcinoma up 
to pembrolizumab data in the first line.

Do you believe there is a future role for 
targeted agents as adjuvant therapy for 
lung cancer?

Up to now we do not have positive results in 
this context and no background supporting the 
biomarker tests in early NSCLC completely 
resected, but this is still an open question and 
father (and more ‘modern’) trials are currently 
ongoing, like ALCHEMIST (A081105, E4512) 
or others (NCT02448797, NCT01405079).

You have been involved in a study 
analyzing genetic characteristics in young 
adults with lung cancer: is precision 
medicine a promising strategy to treat the 
disease in this age group?

Definitively yes: this subgroup of patients 
present with a completely different molecular 
profile compared with the adult counterpart 
showing, for instance, a different (and higher) 
expression of Alk and ROS1 rearrangements and 
sex differentiation even more pronounced than 
what is already known in adult patients.

Crizotinib has proven effective in ALK-
rearranged non-small-cell lung cancer, 
but patients often develop resistance. 
What strategies & therapies do we have to 
overcome this?

Several new Alk inhibitors are currently avail-
able mainly within clinical trials. Some of them 
(i.e., ceritinib, alectinib or brigatinib) have 
already been approved by regulatory agencies 
with a clear efficacy in 
Alk-positive pretreated 
patients and others demonstrated efficacy in 
Phase I/II trials.

Part of your research has focused on 
gender differences in lung cancer. Could 
you tell us about your work with Women 
Against Lung Cancer in Europe?

Women Against Lung Cancer in Europe 
(WALCE) was founded in 2006 to raise aware-
ness with regard to the increase of incidence and 
mortality of lung cancer among women. Ten 
years later, WALCE is a European Advocacy 
Group doing information, prevention, support 
for all the patients with lung cancer and their 
families. WALCE is cooperating with other 
Advocacies across the world and with scientific 
Societies dealing with thoracic malignancies.

Where do you see your own research 
heading over the next 10 years?

I will continue with my commitment in pri-
mary prevention because smoking cessation is 
the real way to ensure that lung cancer could 
become a rare disease. Many results have been 
reached in the multidisciplinary approach but 
many others are still to be done. In the preci-
sion medicine, we are just at the beginning and 
many efforts need to be made to get more drugs 
for further targets. Immunotherapy is for sure 
a great innovation for thoracic malignancies 
but many sides remain obscure in this context.
and some years will be needed to resolve all the questions that today are unresolved.

Disclaimer
The opinions expressed in this interview are those of the interviewee and do not necessarily reflect the views of Future Medicine Ltd.

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