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- 3 Takashima S, Maruyama Y, Hasegawa M, *et al.* CT findings and progression of small peripheral lung neoplasms having a replacement growth pattern. *AJR Am J Roentgenol* 2003; 180: 817–826.
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*From the authors:*

In our paper [1], we summarised the expertise and practical guidelines we have built in recent years for the differential diagnosis and management of focal ground-glass opacities (GGOs) detected by spiral computed tomography (CT), either in a screening programme or incidentally.

As J-J. Hung and co-workers rightly point out, malignant GGOs may show a mixed evolution pattern over time with a decrease in their overall size but an actual increase of the central solid component. This should not be mistaken for a regression, but rather for progression to solid adenocarcinoma [2]. Regression in response to antibiotic trial was defined by us as fading or disappearance of the entire lesion, which occurred in five (12.5%) cases.

Six patients were evaluated retrospectively, as their GGOs were visible on previous CT scans months before the lesion was actually reported. Antibiotics were not prescribed at that point as we did not expect them to have an effect on such lesions. Although this was an assumption, we considered five out of 40 or 12.5% an appropriate effect size measure to avoid overestimating the observed benefit.

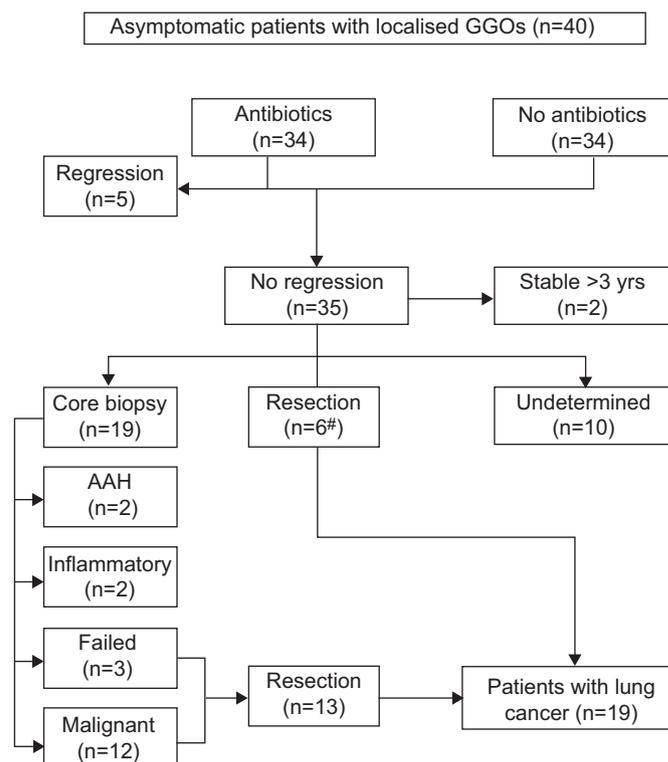
Lesions that are not submitted to biopsy and do not disappear nor apparently progress may eventually turn out to be very slow-growing cancers over time, and we believe that follow-up should be continued at yearly intervals beyond the limit of three years that we have arbitrarily chosen to declare a lesion to be benign. Further observation of our patients may provide interesting information in the future.

The association between a solid component and lung cancer did not reach statistical significance in this series due to lack of adequate power, but this *per se* does not contradict the observation that a solid component within a GGO suggests malignancy. The positive predictive value for lung cancer of a solid density within the GGO was in fact 76% in our patients;

in other words, if a solid component was apparent on CT, the lesions turned out to be malignant three out of four times.

In this series, as of March 2008 only 19 out of 40 patients had undergone surgical resection. Three patients with bronchioloalveolar carcinoma (BAC) had a segmentectomy and two more had a combination of lobectomy plus sublobar resections for multiple mixed-type adenocarcinomas in different lobes; therefore, five out of 18 patients had one or more segmental or sublobar resections for malignant GGOs. In addition, one patient had a segmentectomy only to confirm that the lesion was indeed atypical adenomatous hyperplasia (as it showed a small central solid component). Therefore, six (32%) out of 19 patients had sublobar resections alone or in combination, a proportion that has since been increasing.

We suggest that segmentectomy may be appropriate for focal GGOs mainly based on the abundant literature favouring sublobar resections in these patients [3, 4], and because we believe it is a reasonable compromise operation that allows for adequate surgical margins, hilar nodal dissection and lung function preservation. We acknowledge that firm evidence (derived from large randomised trials) in favour of this approach is lacking, but it should also be remembered that evidence in favour of *a priori* lobectomy for T1N0 lung cancer is still largely derived from a single randomised trial carried out in 1995 by the Lung Cancer Study Group on patients harbouring solid nodules of various nonsmall cell types [5]. Compared with solid lung cancers, BAC and mixed-type



**FIGURE 1.** Diagram of patient management procedures. In six patients, the lesion was retrospectively visible in an earlier computed tomography scan, and antibiotics were not administered. GGO: ground-glass opacity; AAH: atypical adenomatous hyperplasia. #: one patient was operated on twice for a double malignant GGO.

adenocarcinomas associated with focal GGOs seem to behave somewhat differently, as they tend to progress locally over long periods of time [6].

Segmentectomy should, therefore, be adequate if the solid component is <25%, as the risk of lymphatic invasion is close to zero in such cases [7, 8]. However, the surgical approach needs to be tailored, as segmentectomy may not be appropriate for all. Lobectomies were carried out by us if lesions were centrally located (two cases), or were >30 mm, and/or they showed a major solid component (five), or if resection margins were considered inadequate after segmentectomy (three). In two cases, the patient underwent lobectomy in another hospital.

Figure 1 of our manuscript [1] should have actually reported the number of patients showing no regression to be 35 and not 29, as the six patients who did not receive antibiotics are instances of no regression as well. An amended version of the diagram is provided (fig. 1). We thank J-J. Hung and co-workers for helping us clarify the subject further for the readership of the *European Respiratory Journal*.

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**Statement of Interest:** None declared.

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